Memo from the Editor

Problems, always problems. This month we give you the tax status of co-operatives, collective bargaining, processing problems, accounting problems, quality problems. Beyond these questions pertinent to our particular industry loom the vast complicated problems of the atom, of the relationship of two billion people on a ball whirling through space. Strong stuff isn't it.

But think a moment. My Dad, is approaching his eighty-fifth summer. When he was born the world, for all intents and purposes, was closer to the world of the Romans than it is to the world of today. Perhaps what we need is patience.

N.M.

American MILK REVIEW

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Domestic subscription ..... $2.00 per year
Foreign subscription ..... $3.00 per year

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DO CO-OPS HAVE AN UNFAIR

When Garner M. Lester makes up his mind to do something about something the storm warnings begin to fly. Behind the pleasant smile and the friendly drawl there is a determination and ability that are hard to match.

Mr. Lester hails from Jackson, Mississippi, where he cut a wide swath in the cotton business. He is well known in local and national cotton organizations.

For some time Mr. Lester has been concerned over the tax status of cooperatives. Six years ago this concern bore fruit in the form of the National Tax Equality Association, a research and educational organization whose purpose is to study and publicize inequalities in the tax structure. He acted as First Vice-president of the organization for four years and since 1948 has served as its president.

In this article he tackles the knotty problem of cooperative taxation with characteristic vigor. He has not spared the horses.

Yes—

Says GARNER M. LESTER

THE FACT OF THE MATTER is that no business income, whether made by a cooperative or by any other tax-exempt corporation, should be permitted any longer to escape payment of full Federal income tax. There are several reasons why I say this:

1. The purposes for granting tax exemption to cooperatives, colleges, charitable trusts, labor unions, etc. a generation ago have now largely been lost sight of. But certain loopholes remain in the lawbooks, and doing business without paying taxes is assuming the proportions of a full-fledged national racket.

2. Taxpaying business – especially little business – is slowly but surely being strangled by the special privileges of tax-dodging competitors.

3. The long-established American system of private enterprise for profit will be utterly destroyed unless tax equality becomes the law of the land.

4. The Government desperately needs the billion dollars of new revenue that would come annually from taxing the tax-exempts.

Biggest and most important among the tax-dodging competitors of private business are the cooperatives. They were originally exempted from taxes for the simple purpose of helping the farmer to make more money in marketing the products he

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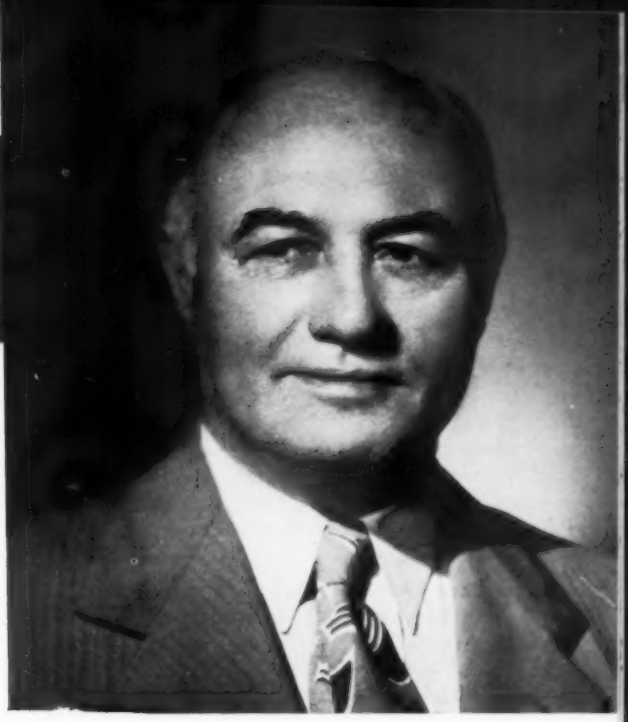
TAX ADVANTAGE?



No—

Says CHARLES W. HOLMAN

"TAX EQUALITY" is a well-sounding phrase which is being used in some circles for the purpose of promiting tax inequality. It has become a shibboleth under which those who oppose farmer cooperatives are more or less successfully confusing the issue of income taxes.

As it is at present, the individual, the members of a partnership, and the members of a cooperative are treated alike. They pay one tax on their income. But the stockholder of a corporation in effect pays two income taxes. The corporation pays a tax on the stockholder's share of the corporate income, and the stockholder himself pays another tax after he has received his dividends.

It is this latter plan — this double taxation — that the so-called "tax equality" advocates want to impose upon farmer cooperatives. They thereby seek a tax advantage for the individual business and the partnership business, both of which would continue to pay only one income tax.

A Democratic Form of Business

The farmer cooperative is a strictly democratic form of business enterprise. It is like a multiple partnership in which each member has one vote, regardless of the amount of business which he puts through it. In this respect the cooperative differs from a corporation, in which voting rights are determined by the number of shares owned by

(Please turn to Page 8)

When one speaks of cooperatives and milk one must inevitably speak of Charles W. Holman. Few men have fought more gallantly or served with more distinction the cause in which they believed.

Born in Mississippi, raised in Texas, he stands today at the apex of a career that has carried the standard of a better agriculture for nearly half a century. Scholar, editor, agricultural diplomat, he has served president and farmer alike. Since 1917 he has been in the forefront of every legislative battle that has concerned the interests of dairy farmers.

Always a champion of the cooperative movement he was instrumental in forming the National Cooperative Milk Producers' Federation, now known as the National Milk Producers' Federation, and was one of the founders of the American Institute of Cooperation. He has been the secretary of the former for twenty-nine years and was the secretary of the latter for a nineteen year period.

To this discussion of the tax status of cooperatives he brings the fire and perception that have become his hallmark.

XUM

raised. They have used that income-tax freedom over the years as a stepping stone for expansion into a multitude of other businesses.

Claiming to be non-profit, the co-ops actually make profits that are identical with those of competing, privately-owned businesses, and the total of those profits is the same as that which results from any other $17 billion of business volume.

But while privately owned corporations, partnerships and individual proprietors pay Federal and state income taxes on total earnings, the cooperatives escape all or practically all such taxes.

About half of all farmer marketing and purchashing co-ops are wholly exempt from Federal income tax under the terms of Section 101(12) of the Internal Revenue Code.

The other half of the farmer co-ops, which are called "non-exempts," file income tax returns, but the tax they pay is a tiny fraction of the tax that a competing, privately owned company would pay.

City consumer co-ops, which are right now growing in numbers and in competitive importance, have no legal tax exemption, but they, too, are able to escape most income tax liability.

The loophole for income tax avoidance by non-exempt farmer co-ops and city consumer co-ops is provided by Treasury regulations.

Under these liberal rulings, patronage dividends – which co-ops define as added payment for produce sold by marketing co-ops, or refunds of over-payment for goods bought from purchasing co-ops, though they are actually over-all profits including earnings made by ventures that have nothing to do with the co-ops' stated purposes–are excluded from taxable income.

Accordingly, it is the general practice of non-exempt and city co-ops to pay out practically all profits in tax-free patronage dividends.

They pay income tax only on such small amounts as are paid in dividends on stock.

The trick in the operation is that patronage dividends are seldom paid in cash by a cooperative that is in the process of expansion.

Instead, the payments are made in stock, scrip, or other evidence of equity, while the untaxed cash is added to capital and reserves.

Many big co-ops have carried on this pyramiding accumulation of untaxed earnings for years – until they have become dominant in their industries.

Meanwhile, they have bought out large and small competitors – paying for them out of tax-free earnings and taking them off the tax rolls in the process. And numerous concerns have voluntarily shifted from taxpaying status to cooperative tax-free status.

This is the way cooperation has grown – and will continue to grow so long as it is able to avoid the income taxes that its competitors must pay.

It is the way, too, that Government revenues have been depleted.

The income-tax-free activities of co-operatives now include not only the marketing and processing of farm products and the purchase of farm supplies, but also the manufacture or distribution of farm machinery, hardware, automobile and tractor tires, batteries and supplies; household electric appliances; cigars and cigarettes; lipstick, face creams, leg makeup, toothbrushes, vitamin pills, and a host of other products.

Co-ops drill oil wells, refine petroleum and sell gas at filling stations. They are in mining, banking, insurance, lumbering, publishing, paper making and home building. They run electric systems, a railroad, telephone lines and funeral parlors. They operate hospitals, summer camps and radio stations.

In 1946, cooperatives of all kinds did about 13 billion dollars in business volume. In 1947, they did about 15 billion. Last year, according to careful estimates, they did more than 17 billion. In less than another five years, at their present rate of growth, they will be doing at least 25 billion.

Why should they continue to go tax-free?

A few years ago we fought and won a great war. Business paid higher taxes than ever before, and still the Nation went into debt to the tune of more than 250 billion dollars – which eventually, will have to be paid by taxes.

In that war effort, the cooperatives profited greatly – but they paid little or nothing toward the victory that was won.

Now we are spending billions in preparation for a possible third world war. We are spending more billions to support agricultural production – donating tax money to the members of cooperatives and other farmers. We are proposing to spend still more billions in Federal aid to education, to support a mammoth system of socialized medicine, to care for the aged and the infirm, the widows and fatherless children.

Cooperatives and their members expect to share in these expensive benefits, but they are fighting tooth and nail to keep from paying the smallest share of the costs.

I am confident that in the end Congress will take away the special privileges, tax and otherwise, on which the co-ops have been thriving for all these years. But the co-ops will not give up easily. They are arrogant; they say it is un-American to ask them to pay taxes like the rest of us. They are powerful, with millions of members. They are politically potent after 20 years of experience in lobbying for special privileges. They are well organized, from the national level all the way down to the local farms. They are rich, for many of them enforce a check-off system, like that of the labor unions, to finance what they call their "educational activities." And many of them are even now monopolies, with all the power that goes along with monopoly protected by law from any prosecution.

A year ago, the Maryland-Virginia Milk Producers Cooperative was indicted, along with several Washington milk distributors, for conspiracy to fix prices and other alleged violations of the anti-trust laws. The case was thrown out of the District Court when the co-op attorney declared: "Elimination of competition is a perfect legal right of a cooperative . . . and the very end and purpose of a cooperative . . . It is our right to become a monopoly."

And so it appears to be–under the terms of the Capper-Volstead Act, passed in 1922 and still on the books. But the Justice Department carried the matter to the Supreme Court, which

(Please turn to Page 52)

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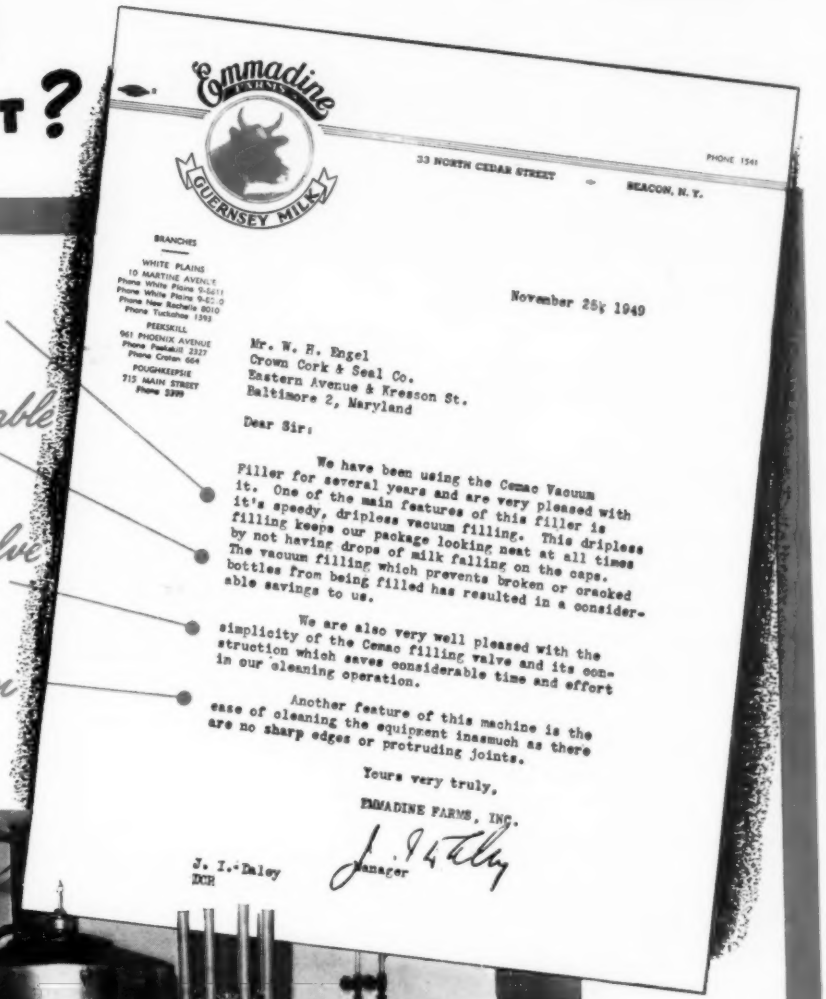

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November 28, 1949

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Manager

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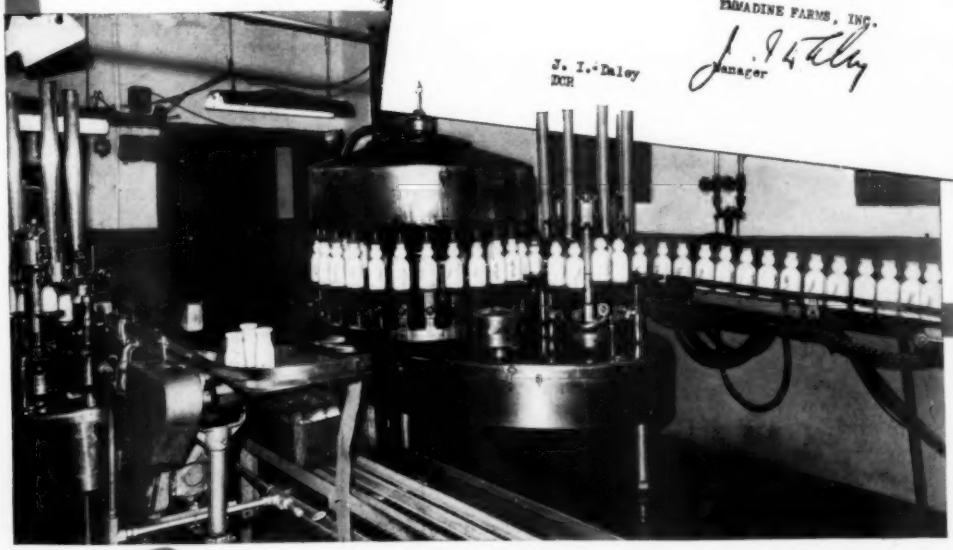

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The farmer cooperative is a strictly democratic form of business enterprise, says Mr. Holman. At the annual business meeting of the cooperative, officers are elected, reports of the year's activities are presented, and future activities are considered.

the individual—in other words, on the amount of capital he has invested in the company.

The cooperative differs from the corporation in another important respect. While both the cooperative and the corporation are formed to perform services of one sort or another, the corporation is in business primarily to make a profit on invested capital. The cooperative, on the other hand, is formed to enable its individual members to make a greater profit for themselves on the commodities which they produce by marketing such commodities at cost. Its sole purpose is to render services without profit to itself.

Take the case of a dairy cooperative.

It is comprised of a number of milk producers each of whom has one vote in its membership meetings, the election of directors, etc. Each of the members usually has some capital investment in the concern, upon which the cooperative may pay a moderate rate of interest. This capital investment is not made for the purpose of yielding a profit, but to provide the cooperative the capital needed for its operating facilities—its building, equipment, and so on.

The Aim of the Cooperative

In other words, the members of the dairy cooperative have set up their own concern to handle their own products at cost. Their purpose and hope is to do the job so efficiently and effectively that they will receive more for their milk and cream than if it were handled by some other concern on a profit basis. This increased return to themselves might be the result of a better price in the marketing of the product, or in savings made in handling the product, or a combination of the two.

Some cooperatives, for example, have been set up to perform at cost various services in the assembling, processing, packaging, transportation and marketing of dairy products — services which in other instances are performed by proprietary corporations for a profit. It is the aim of the members of these cooperatives to perform these services for themselves—perhaps better and perhaps at a saving under what their cost might otherwise be. Their chief purpose, of course, is to gain through their cooperative the best possible return for the milk and cream which they deliver to it.

It should be obvious, therefore, that whatever amount of money the products net to the cooperative belongs to the producers. If the cooperative nets a few additional cents a hundredweight because of advantageous sales or because of a saving in handling costs, the money belongs to the producers as a part of the return for their products. That is what the cooperative is organized for.

The Question of Patronage Dividends

But the cooperative does not necessarily remit the full returns to its members immediately. That is where the matter of patronage dividends or patronage refunds enters the picture. And that is where the confusion is created concerning income tax payments.

In its normal day-to-day and month-to-month operations, the dairy cooperative usually remits to its members twice a month or monthly. From its gross returns for products sold it customarily sends checks to its members at the current price of milk or butterfat. But the members may still have more money coming — the money, for example, that has been saved in handling costs. The members still have coming all of the gross returns for the products which the cooperative has sold, minus only the expenses and costs of running the business.

This amount of money — the difference between what the member already has received and the net amount which was realized by the cooperative —is usually computed annually. It is sent to the member, or it may be credited to the members as a book account. It is called a patronage dividend—but it is no dividend in the ordinary sense of the word. It is a part of the money due to the member in payment for his milk or cream. It is neither profit nor income to the cooperative. It is income solely to the member for whom the cooperative actually is the business agent or "hired man."

In its simplest analogy it is just as if the farmer had sent his hired man to town to sell his products. The farmer pays his wages and any expenses that the hired man is put to in fulfilling his job. But whatever the hired man receives for the products belongs to the farmer. The fact that part of the proceeds may be withheld for a matter of weeks or months does not alter the fact that they belong to the principal and not to his agent.

Where Double Taxation Comes In

In any event the milk producer is subject to income tax on all of the proceeds he receives from his cooperative. If the cooperative were also required to pay a tax on this income it would clearly be double taxation as

(Please turn to Page 53)

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Let's Talk Accounting

By JIM KLUGER

QUESTION NO. 1. — Some months ago, we went into the production and sale of ice cream in addition to our fluid milk and cream business. We would like to know the cost of our ice cream business monthly, and would appreciate your advice if such can be done without a complicated cost system.

ANSWER NO. 1. — To determine your ice cream production costs, you don't need a complicated cost system, but you do need to keep track of all expenses in connection with its production. The most common expenses are: milk, cream, condensed skim, sugar, stabilizers, flavors, cartons and other containers, labor, and equipment depreciation. You might also allocate space rental to ice cream production, and you must charge for hardening room and storage.

A comprehensive cost finding system would necessitate first determining the cost of manufacturing your mix, and then finding the costs for the different forms of ice cream handled (bulk, packaged, novelties, etc.). For a relatively small volume, however, those two operations can be combined and an overall cost determined which, while not absolutely accurate, will serve as a fair measure of operations. To collect the required data, summarize monthly your sales of ice cream in the three categories: bulk, packaged, and novelties. Take an inventory of mix and finished products each month and summarize the whole as in figure 1.

Jim Kluger, specialist in dairy accounting, conducts his exclusive column in the "American Milk Review" each month. If you have an accounting problem or simply an accounting question write to Mr. Kluger at Kapleau, Kluger & Company, 1414 South Penn Square, Philadelphia, Pa. He'll do his best to give you the straight dope.

FIGURE 1.

Item	Sales in Units	(+) Closing Inventory	(—) Opening Inventory	Total Units Manufactured	Quart Factor	Total Quarts Manufactured
10 quart cans	40	10	15	35	(X) 10	350
quarts packaged	1200	50	100	1150	(X) 1	1150
4 oz. popsicles	5000	300	200	5100	(X) ¼	638
Total quarts ice cream produced						2138
quarts of mix equivalent (70% overrun)						1258
mix inventory — end of month — qts.					(+)	120
mix inventory — first of month — qts.					(—)	40
mix produced in month					qts.	1338
mix produced in month					lbs. (X 2.3)	3077

FIGURE 2

Raw Product	Mixed Formula	Pounds of Raw Product
40% Cream	30.5%	938
Skim	29 %	892
Condensed Skim	25 %	770
Sugar	15 %	462
Stabilizer	.5%	15
Total		3077 lbs.

Having determined the total pounds of mix manufactured, apply your formula to compute the pounds of the various raw materials used, in figure 2.

At this point, you apply the costs per pound of the different raw materials used to arrive at the total product cost of mix produced and accounted for. During the month, as you go along, keep track of the batches of mix actually made. By comparing the total actually made, or put into process, with the total accounted for, you will be able to compute your monthly plant loss on ice cream operations.

Your cost of mix produced, determined as above, plus your plant loss, found by applying the unit cost of a quart of mix accounted for, will be your total products cost of mix sold, or inventoried in the form of mix and ice cream. Depreciation of equipment and hardening room, cost of containers, labor, flavors are added to the total products cost. The sum will be the total cost of ice cream sold during the month. As you don't have full time personnel on operations of ice cream, you will measure or estimate the labor time consumed and charge ice cream with its proportionate share.

QUESTION NO. 2. — I operate a fluid milk business as a sole owner, but I wish to take my two sons into partnership, or perhaps form a cor-

(Please turn to Page 59)

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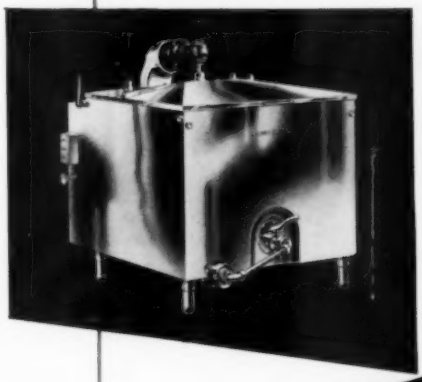

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City ..... Zone .... State .....

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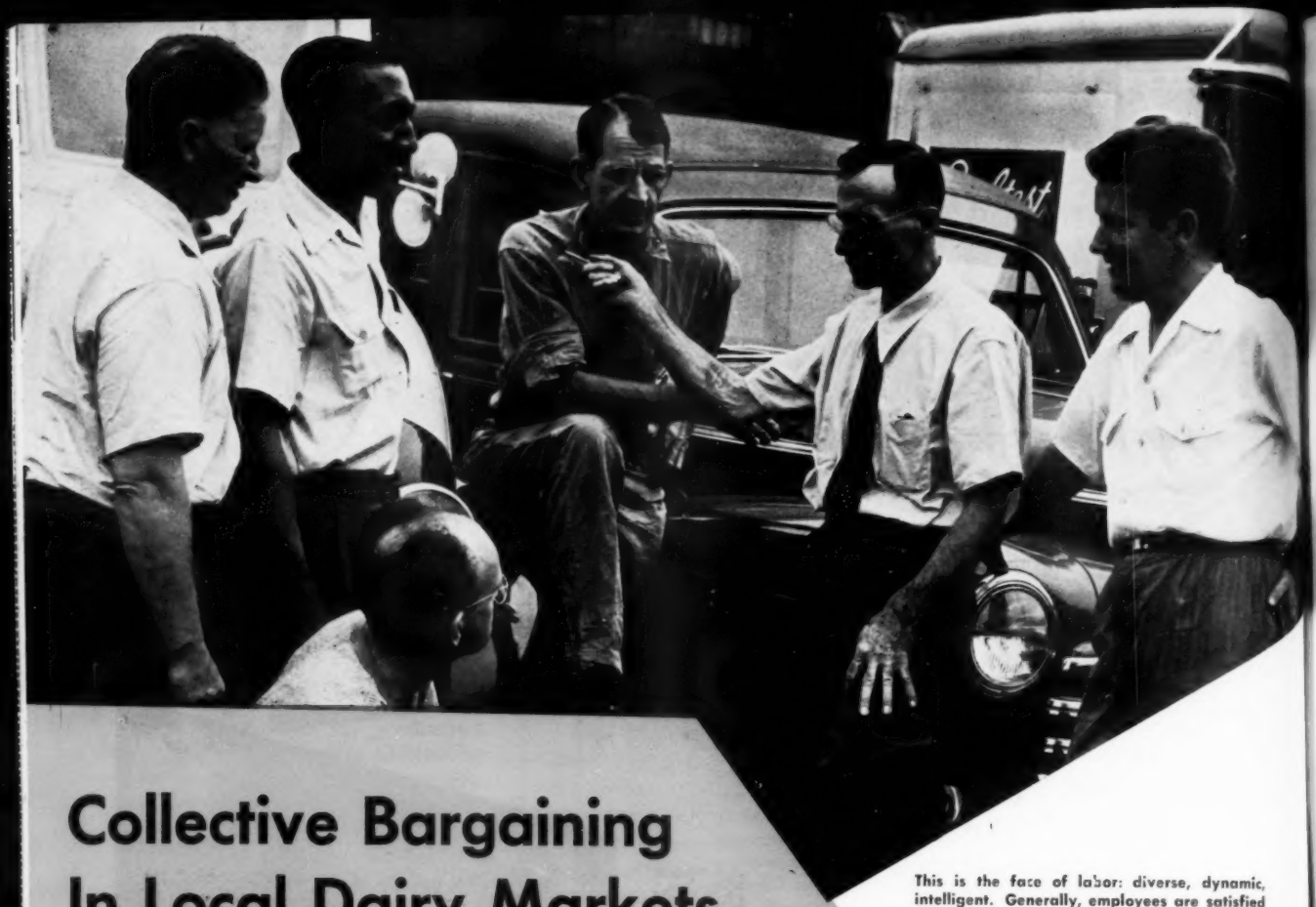

Collective Bargaining In Local Dairy Markets

This is the face of labor: diverse, dynamic, intelligent. Generally, employees are satisfied with wages and working conditions. If, however, your labor relations are not good your men are likely to be easy prey for the typical union organizer, says Mr. Hickey

By FRANCIS E. HICKEY

WHETHER WE LIKE IT or not, the dairy industry, particularly the fluid milk division, comes very close to being a public utility. We are engaged in marketing a food commodity which the public must have to sustain itself. Any disruption in the orderly distribution of milk brings untold hardship to the sick, hysterics from families with babies and condemnation on the dairies and its employees.

Because we cannot permit a disruption in the orderly distribution of milk, our relations with our employees, organized or unorganized, become of paramount importance. Intelligent and prudent collective bargaining becomes a "must" of our business. Since it is the law, we have no alternative but to negotiate across the table with representatives of our employees if called upon to do so. While we may not like or agree with the law, a refusal to bargain by either the employer or employee is in this day indefensible.

This discussion must proceed on two avenues — one part for those of us who are organized and "under sentence with slight hope of reprieve"; and the other for those of us still operating

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REGARDLESS OF TRUCK SPACE LIMITATIONS

There's a QUIRK *Cold Seal Cabinet*

TO FIT YOUR NEEDS AND PROTECT YOUR PRODUCTS

Now you can choose a Quirk Cold Seal Cabinet from a broad range of shapes and sizes to fit practically any available truck space. Notice the different cabinets illustrated and then visualize how easy it is to adapt one of these units to your truck.

Profit on load space automatically increases when these cabinets are used. In addition to substantial savings made by preventing *summer spoilage and winter freezing, general distribution costs are sharply reduced. Products are checked out but once.* Excessive product handling is therefore eliminated.

Other progressive dairies are streamlining their distribution by using Cold Seal Cabinets in their trucks. An inquiry will show how you can add to profits by adapting these units as standard truck equipment. ***There is no obligation for this helpful information.***

YEAR ROUND CABINET USE RESULTS IN LARGER PROFITS FROM THESE *Features*

- Cold sealed in — ample protection from hot weather spoilage and cold weather freezing.
- Handling costs reduced—valuable time saved by using regular square cases instead of TRANSFER CASES.
- Cabinet's use ends checking-in unsold milk — reduces handling.
- This cabinet used with one other model has capacity to store all returns — entire truck need not be cooled for a few bottles going back to the plant.

PRACTICAL DESIGN ADVANTAGES

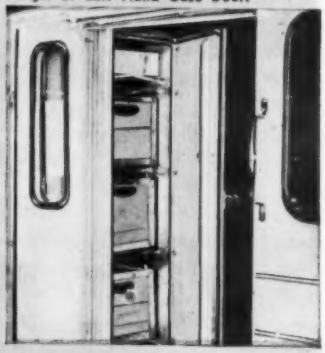
1. Inner and outer liners made of aluminum to reduce cabinet weight.
2. Metal is easy to clean and to maintain — cabinet is neat in overall appearance.
3. Cabinet's design permits use of all standard square cases.
4. Adequate rigid and semi-rigid type insulation between cabinet liners prevents cold loss.

MODEL No. 310
Capacity: 9 Regular Square Quart Cases
Outside Dimensions: Length 48⅝" — Width 15⅜" — Height 44⅛".
Front Icing Type — Right or Left Hand Door for Case Compartment.

MODEL No. 314
Capacity: 6 Regular Square Quart Cases
Outside Dimensions: Length 48⅝" — Width 15⅜" — Height 33⅜".
Front Icing Type — Right or Left Hand Door for Case Compartment.

MODEL No. 325
Capacity: 4 Regular Square Quart Cases
Outside Dimensions: Length 22½" — Width 28½"; Height without skids 25½".
Rear Icing Type — Right and Left Hand Door.

MODEL No. 326 (Slant Back)
Capacity: 9 Round Quart Cases or 12 Square Quart Reversed.
Outside Dimensions: Length 58 15/16" — Width 16⅞" — Height 45¾".
Front Icing Type. Separate ice door — Right or Left Hand Case Door.



COLD SEAL CABINETS PROTECT PRODUCTS THE YEAR ROUND

The Quirk Company

3382 E. LAYTON AVE. CUDAHY, WIS.

FRANCIS E. HICKEY

Francis E. Hickey is an attorney whose offices are in Rockford, Illinois. He has spent many hours around the bargaining table on behalf of numerous business organizations. As the representative of various dairy concerns he speaks with a veteran's authority on this question of collective bargaining. This article first appeared in the form of a paper presented at the Illinois Dairy Products Convention in December. We think you will find it worthy of your reading time.

with what I refer to as a full measure of management prerogative.

It is no secret that the Teamsters Union is solidly pressing its program of organizing the dairy industry. You may believe that organization of your plant is remote, but may I suggest that you watch for it and, if possible, conduct your relationship with your employees so as to make it difficult for the outside representatives of the Teamsters Union to force organization on your employees. Generally, your men are content and satisfied with wages and working conditions. However, they are confronted with union organizers who promise benefits through organization which, in reality, are never attained. If your employer-employee relations are not good, your employees are easy prey for the typical union organizer.

When the Organizer Comes

In practice, if you are requested to negotiate with the particular union who claims to represent your employees, there are certain procedures under the Taft-Hartley Act which must be followed before you are obliged to begin collective bargaining. A petition for a representation election is usually filed by the union; a preliminary conference held by the employer, a representative of the union and the National Labor Relations Board. The union representative will almost always endeavor to have the employer consent to an election. From past experience, it is my recommendation that you refuse to consent to any election. You gain no consideration in your negotiations with the union because you have consented to an election, and you create a better impression with your employees who may be opposed to the union in the first place. Under recent decisions of the National Labor Relations Board, you are permitted, by letter or by notice, to point out to your employees the pros and cons of having a union in your plant. You, of course, should not print or write anything which is so derogatory of the union that you might incur the possibility of an unfair labor practice charge. I think a good formula to pursue in this letter or notice is to stress to the employees their absolute freedom in voting, and also urge upon them that they should exercise their voting right at this election.

If, after the representation election, the union achieves a majority vote, they will then ask you to consent to a union shop. This you should also strenuously oppose and insist upon an election among your employees to determine whether or not they desire to have a union shop. Assuming then that the union wins the election as to representation and the union shop, you are then confronted with negotiations and collective bargaining.

Who Shall Conduct Negotiations

The suggestion I have to make at this point apply to those of us who have been negotiating with the union for many years, as well as to those who are negotiating for the first time. There are, it seems to me, two alternatives to be decided upon with reference to the problem of who shall conduct the negotiations. The union, in most cases, will propose the same contract for all of the industries in a particular locale. This practice has been fostered and encouraged by the union and is referred to as "industry-wide bargaining." There is both good and evil in this practice. The evil emanates from the fact that either you or one of your competitors is so situated economically that the demands of the union can be met without seriously injuring the financial stability of the business. Simultaneously, others in the industry may be unable to grant the demands acquiesced in by the one company financially able to do so. This quite naturally works a hardship, particularly on the smaller dairies. The good which results from industry-wide bargaining emanates from the fact that all of the individual operators may be able, in what I call a perfect situation, to stand together as a unit in opposition to the union's demands. If you can maintain a solid front in the industry, you can achieve a more satisfactory union contract.

Therefore, with reference to the problem of who should do the bargaining, I would suggest that where only one plant is involved, particularly in a small population center, that the owner or manager of the dairy participate in the negotiations. Generally, your own employees, in addition to the union organizer, will be sitting across the table from you; and the closer you are able to keep in touch with the process of negotiations, the more satisfactory contract you will achieve.

If, on the other hand, the negotiations concern more than one plant, I suggest that all of the dairies involved agree upon one person, lawyer or otherwise, to conduct the negotiations. This may appear to be a rather cold approach to the problems of your employees encountered in negotiations, but serves to stabilize the conduct of the negotiations. This requires that the group instruct the negotiator in all phases of the negotiation and establish beyond any doubt that the group will stand firm as a unit against the demands of the union. This precludes the union from playing one owner against the other, and makes impossible the divide and conquer theory upon which the unions operate.

This plan of negotiation might sound to you as too perfect and impossible of realization. I tell you from experience that it can be accomplished and is operationally effective. It requires the utmost cooperation and good faith from each employer, and any deviation from the plan of nego-

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DAIRYGRAM

CALL FOR ACTION TO MORRISON HOTEL, CHICAGO, MARCH 27

DIFFICULTIES OF DAIRY INDUSTRY ADD UP TO 7 BILLION POUNDS OF MILK---APPROXIMATELY 5 PER CENT OF TOTAL PRODUCTION. THIS 5 PER CENT DEPRESSES PRICES FOR ALL THE MILK PRODUCED---UNDERMINES PRICE STRUCTURE OF EVERY DAIRY PRODUCT---MILK, BUTTER, CHEESE, ICE CREAM, EVAPORATED AND DRY MILK. THIS ISN'T SURPLUS MILK. IT'S MILK THAT CALLS FOR ADDED SELLING. SOMETHING MORE THAN LEGISLATION, MARKET BARGAINING AND GOVERNMENT SUPPORT PRICES ARE URGENTLY NEEDED TO STOP TODAY'S DOWNWARD TRENDS. IMMEDIATE ACTION MUST BE TAKEN TO BRING CONSUMPTION UP TO THE LEVEL OF PRODUCTION. IT'S AN INDUSTRYWIDE RESPONSIBILITY---AND A NATIONWIDE CHALLENGE TO INDUSTRY LEADERSHIP. IT CALLS FOR NEW THINKING, BUSINESS COURAGE AND DECISIVE LEADERSHIP IN ADVANCING A BUSINESS PLATFORM OF EXPANDED ADVERTISING, MERCHANDISING AND SALESMANSHIP FOR THE INDUSTRY TO "SELL ITS WAY TO SUCCESS." THIS IS THE KEYNOTE OF THE NATIONWIDE DAIRY INDUSTRY RALLY IN CHICAGO MARCH 27. BACK YOUR DELEGATES IN URGING POSITIVE ACTION IN MAPPING OUT WAYS AND MEANS OF AN AGGRESSIVE SALES PLAN FOR THE INDUSTRY THAT WILL TURN THE TRENDS FOR DAIRYING UPWARD AND ONWARD. LET'S ALL OF US DARE. LET'S ALL OF US DO---FOR DAIRYING.

AMERICAN DAIRY ASSOCIATION

tiation, of course, renders it ineffective. Some of the larger companies are in a position to employ their own labor negotiator who bargains for the company in all localities according to a policy set by the main office of the company. However, I believe the representative of the individual employer can work effectively with such a representative to the end that a good contract is arrived at. I have found these representatives of the large companies almost always willing to negotiate with the representative of the individual operators unless, of course, there is no common ground upon which negotiations can be conducted.

Insist On Management's Prerogatives

Referring now to specific clauses in the contract, I believe the employer should always insist upon a management prerogative clause which should read something like this: "The union recognizes that the conduct of the business and the operations of the company are vested exclusively in the company, including the right to hire, terminate employment, require employees to observe company rules, to lay off employees because of lack of work, to decide the number and location or dissolution of routes, to determine the number and location of its plants and the products to be manufactured and the methods and schedules of production." The union will endeavor to soften this clause, but I urge strongly that you insist upon it without qualification. Without it the contract becomes a one-way street, and you sacrifice many rights which rightfully belong to the employer.

One of the favorite devices employed by the union is to select a particular locale or a particular employer as a guinea pig for certain new and novel contract provisions. At first or even second reading some clauses suggested by the union may appear to you innocuous or insignificant. May I caution you to examine every clause submitted by the union carefully with respect to the following:

1. Will it create a dangerous precedent in your particular plant?
2. Will it harm the industry generally in your locale?
3. Will it create a dangerous precedent in the industry as a whole?

Will the milk plant of the future be municipally owned and operated? In Jamestown, New York, the question comes before the public in a matter of weeks. The remarkable story of a campaign to put the public in the dairy business will be told in the April issue of the *American Milk Review*.

The union operates under directions from the International. Instructions are sent out to particular unions to try to achieve certain clauses in contracts which may not be detrimental to particular individual companies; but once inserted, will spread throughout the industry and cause grave harm. To be specific, I am thinking of a clause recently suggested by the Teamsters Union for a contract in which I was interested, providing that should the company spread its operations to another vicinity, it will agree to pay the rates in effect there, or will follow certain precedents established under the other locale's contract. You may not ever contemplate moving to another area of distribution; but should events arise which suggest it, you will then be plagued by rates and contract clauses in effect in the other area and which you will find will be insisted upon in your contract the next time you negotiate. I cannot over-emphasize the need for your examining suggested clauses most carefully so that you will avoid being the guinea pig for unwise contract provisions.

Can There Be Pensions?

Now that we are living in the "pension era" I suppose many of you have either encountered demands from the unions for pensions, or contemplate being faced with pension requests. In my opinion, pension plans as generally discussed are impractical in the dairy industry. This is primarily true because the working span of our employees is necessarily subjected to certain physical limitations which can occur in a man's lifetime many years before he attains the age of 60. While it is true that on the inside operation men may be able to work effectively until they are 60, it is almost out of the question for outside delivery men to do so. To retire a man on a pension then when he is only 50 years of age, or even less, would require a contribution, be it made by employer or employee, so costly that neither the employer nor the employee could afford it. Now, I recognize that some insurance companies will tell you that it is feasible in our particular work. However, when you sit down with the union negotiators, I firmly believe that most of them will recognize, if properly shown, that a sound pension plan cannot be achieved.

Instead, if there must be additional benefits to our employees, I recommend strongly a profit-sharing plan, which is controlled and determined solely by the employer, but which will encourage your employees to work efficiently and know that they have also a responsibility and a stake in the success of your business.

In practice, I find the Teamsters Union not particularly enthusiastic about pension plans, since I conclude they are operating on the theory that "a bird in hand is worth two in the bush."

Finally, may I suggest that the art of collective bargaining is still in its infancy. We must admit that many employers are just now learning to bargain collectively, and are often less experienced than their counterparts sitting on the other side of the table. Sometimes employers take much too seriously clauses which are often submitted with general union demands for good measure. In truth, the union does not expect the request to be granted, and might even be embarrassed if they were granted, since thereby is removed a good talking point for next year's negotiations. Without question, on the other side there is often equal inexperience; sometimes the union unwisely raises an issue from which its inexperienced negotiator does not know how to recede or about which the union assumes a stonewall attitude. These are only symptoms of the immaturity of our industrial bargaining, and should not be too alarming.

Remember that collective bargaining is a two-way street, and if both employer and employee strive for intelligent, honest negotiations, we can maintain industrial peace in an industry which can ill afford cessation of distribution because of labor unrest.

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Your Neighbors Like It... YOU WILL TOO!!

On the map we've marked off some of the places where Girton Soaker Bottle Washers have been installed.

You'll find one of these washers near you, doing an efficient, economical job of washing milk bottles. Near you is a dairyman who is glad that he chose GIRTON.

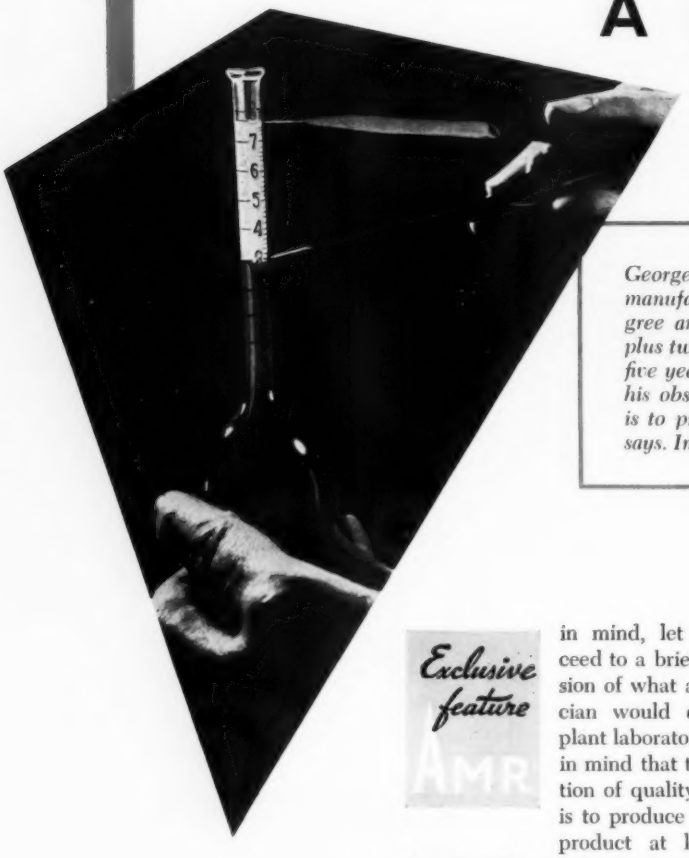
We believe the user is our best recommendation. Write us for the name of an installation near you, where you can get an unbiased opinion on just how good these machines really are.

Available in capacities from 16 to 126 bottles per minute. Also a model only 8 ft. long for plants with limited space. Write for descriptive bulletin on the model best suited to your needs.

GIRTON MANUFACTURING COMPANY

• MILLVILLE, PA.

A LABORATORY PROGRAM



George H. Watrous, Jr. is an instructor in dairy manufacturing at Penn State. A Bachelor's degree and a Master's degree from that institution plus two years in commercial laboratory work plus five years of teaching and research give weight to his observations. "The function of the laboratory is to produce a better product at lower cost", he says. In this article he tells you how it can be done.

TWENTY YEARS AGO about the only quality test used by small dairymen regularly was our old friend, the Babcock fat test. Today, particularly in and near larger centers of population, most plants either have laboratory facilities of their own or rely on a nearby commercial laboratory to aid in controlling the quality of the products produced. Practically all large dairies have elaborate laboratories that do many quality control functions. Perhaps some small dairies feel that extensive laboratory facilities are too expensive; they may feel that the services of a reliable commercial laboratory are better suited to their needs. In some cases this may be true; however, an analysis of the actual case may show that a plant laboratory would pay for itself. With that thought in mind, let us proceed to a brief discussion of what a technician would do in a plant laboratory. Keep in mind that the function of quality control is to produce a better product at less cost that is going to win new consumers.

Exclusive feature AMR

Use Good Raw Material

The first essential in any quality program is assuring good raw products, whether our business is making potato chips or processing milk. Regardless of the care exercised in the plant, the final products cannot be better than the raw ingredients used. With that in mind, the first function of our proposed technician would be the periodic examination of all raw milk supplies entering the plant. What procedures would be used and how often would they be applied? This is dependent on several factors, among them local or state regulations and how long a quality control program has been in effect.

In many sections of the country considerable stress is currently being placed on low thermoduric bacterial counts. This information, obtained by laboratory pasteurization procedures, coupled with the information found by microscopic counts, is very useful in reducing both excessive thermoduric counts or high total bacterial counts. The microscopic count is particularly valuable in determining high counts due to poor cooling of milk and high leucocyte counts or mastitis; while the thermoduric count is a direct measure of the care used in cleaning and sterilizing farm utensils, especially milking machines.

Another quality test that is frequently applied to shippers supplies is the sediment test. Two methods are in use, the "off the bottom" test and the mixed sample test, the former being preferred by most operators since it is more critical.

Unfortunately, our current methods of paying for milk are conducive to watering the product. This is especially so when the base price for milk is high. Checking milk at the receiving platform by means of the fat test and lactometer reading is not foolproof but grossly adulterated milk can be detected readily. Verification of suspicious samples always should be made by a more critical method such as the freezing point determination.

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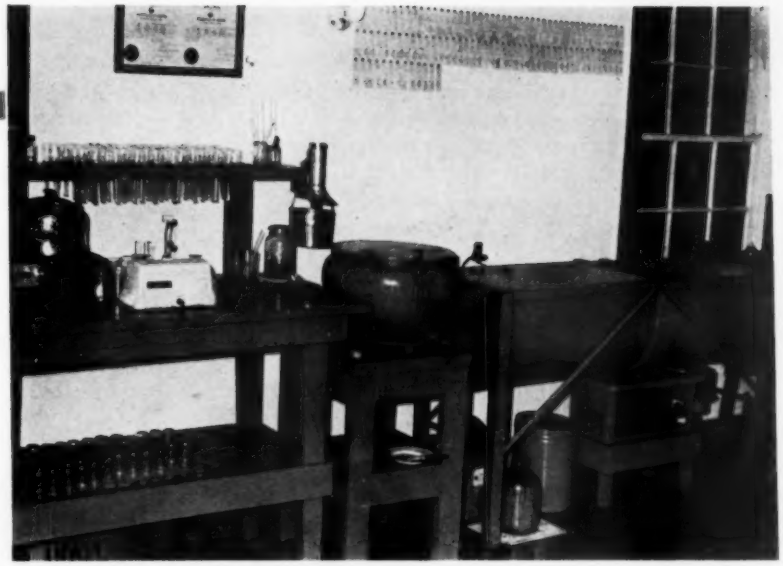
FOR SMALL DAIRIES

By George H. Watrous, Jr.



A good laboratory not only pays for itself but it also may be the key to the expansion of your business. Elaborate facilities are not necessary but a smooth running program is.

Did you ever wonder how much extra water you were buying in your milk? Not a few dealers have had unfortunate enlightenment after checking for adulteration. This practice is not only illegal and dangerous; the cost per pound of milk fat is increased where high fat testing milk is adulterated with water.

Watch Those Off Flavors

A valuable test that should be in use in every dairy plant is checking raw supplies for abnormal flavors or odors. Carefully smelling the milk before it is dumped may result in reducing consumer complaints. Various feeds impart undesirable flavors, poorly ventilated barns may cause a "cowy" or "barny" aroma. Physiological disturbances in the cow may result in off flavors, odors or even bloody milk. Many times a producer may ship milk satisfying every criterion—except that it doesn't taste or smell good. The consumer may not have extensive knowledge of bacterial counts, but he can readily tell when the flavor or ordor is abnormal.

Checking incoming milk on the receiving platform for conformity to temperature requirements is a useful aid in maintaining low bacterial counts. Rejection of milk showing temperatures above the specified maximum is one way of getting farmers to use mechanical refrigeration. Ground water supplies usually are not cold enough to cool milk properly, at least in most locations.

Testing composite milk samples for fat is, of course, one of the routine procedures of the technician. Farm inspections should be made by a licensed inspector. It is fortunate when the laboratory technician does this work, because his information regarding bacterial counts of the patrons' supplies make a visit to the farm much more significant. It is much easier to obtain results in quality improvement when laboratory results are an integral part of farm inspection.

Let us now focus our attention on the plant control that is within the realm of our proposed laboratory program. If the full value of the laboratory is to be obtained, there are many routine bacteriological and chemical tests that should be employed. In addition, the laboratory can perform certain other functions that are essential in a quality program.

What Kind of Tests

First, the routine tests that are essential in many areas include daily checks on all processed products to insure conformity to whatever standards that must be met. The tests to be employed will naturally vary with the products processed and the regulations of the given area. Let us assume that your plant is essentially interested in processing fluid milk, cream, chocolate milk and buttermilk. Surplus skim may be made into cottage cheese and surplus cream sold. Under these conditions our proposed laboratory should make daily bacteriological checks to insure conformity to the required standards. These daily bacteriological tests should include standard plate counts and coliform determinations on milk, cream and chocolate milk. In areas where the microscopic examination of pasteurized milk and cream is part of the quality program, this test should be included. In addition to routine tests on the processed products, a bacteriological line test at regular intervals will aid in detecting possible points of contamination. This line test should include total and thermoduric bacterial counts on each lot of milk before and after each piece of equipment. In addition, coliform tests on pasteurized products, beginning with the pasteurized product in the pasteurizing equipment, will be an index of post-pasteurization contamination. Other bacteriological examinations that may aid in finding points of contamination include sterility tests for bottles, caps, and cans.

Use Phosphatase Test

Among the chemical test that should be run daily on all pasteurized products are fat tests and the phosphatase test. The significance of the fat test in insuring conformity to legal standards as well as its role in a competitive market is obvious. The phosphatase test is a very sensitive test which detects incompletely pasteurized products.

There are many other inspections of

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processed products that can be profitably incorporated into the quality program, including sediment determinations of milk and cream, cream volume in pasteurized milk, homogenization efficiency of homogenized milk, viscosity and whipping ability of cream, acidity, viscosity and absence of wheying-off in buttermilk, and organoleptic examination of all products.

The propogation of cultures for cultured products should be one of the routine tasks of the laboratory. The quality control of these products can best be accomplished by a trained technician. Producing uniformly good buttermilk and other cultured products is a very profitable side line that can be expanded only with close attention to culture propagation, acidity control, flavor and viscosity.

Supervision of bottle and can washing procedures also should be exercised by our proposed laboratory. This would entail selection of the proper cleaners based on such factors as water hardness and types of equipment, frequent analysis of the washing solutions at the beginning and at the end of the operation, to insure proper concentrations and lastly frequent checks to insure maintenance of proper temperatures in both bottle and can washers.

The laboratory should work closely with plant employees in supervising cleaning and sterilization of plant equipment. Too many plant operators rely on guesswork in buying commercial detergents, rather than on an analysis of the job to be done. Most commercial cleaners will do a satisfactory job of cleaning under certain conditions, but many are very poor with hard water supplies or where special cleaning problems are found. The proper cleaners, used at the correct concentration, not only will be more efficient but also cheaper in the long run. Sterilization procedures are usually specified in state requirements; it is the duty of the laboratory to see that these basic requirements are met and than any additional sterilization safeguards necessary are employed.

Lastly, a daily inspection of the physical premises and all equipment ought to be made after the daily clean up. This will aid in preventing employee negligence and in maintaining the plant so that visitors are always welcome.

Presenting the Ladies

MISS MYRTLE E. VIALL

Viall's Dairy, Inc.

Providence, R. I.

A FEW WEEKS past more than 25,000 people visited the W. C. Viall dairy in East Providence, Rhode Island during the course of week long open house. They were impressed with many things, impressed with the routemen in their smart uniforms of Lincoln green, with the well groomed trucks, with the massive bottle washer and the rooms filled with gleaming complicated stainless steel equipment. They were impressed with the hospitality and the kindness with which they were greeted. These were little things, friendly things. They were the touch that made the difference between the ordinary and the superior. The touch belonged to Myrtle E. Viall, General Manager and Treasurer of W. C. Viall Dairy Incorporated.

A half century ago Miss Viall's father, William C. Viall, began to market the milk produced on his farm through a retail milk route. Old timers in Providence remember the horse drawn milk wagon that Bill Viall piloted through the city streets. By 1924 the business had grown to seven retail routes, which, curiously enough, was exactly the number of children that made up the Viall family. Mr. Viall was one of those energetic yankee personalities who, in addition to his farm, his family, and his business, found time to participate extensively in the life of his community. He was a director of a local bank and was instrumental in the establishment of the Rhode Island Milk Control Board. He was the first dealer representative on the board.

Miss Viall literally grew up with the milk business. It was impossible to be raised in the atmosphere of farm and dairy without catching the fever. While she was in school Miss Viall worked at the dairy after school was out and during vacations. It wasn't quite as fancy an education as some of her contemporaries acquired but for one who was headed for the managerial chair of a growing business operation in a field the margins were small of the competition rough it was a solid foundation on which to build. In 1924, after her graduation from high school, she took her place alongside her father and brothers in what was and still is a family business.

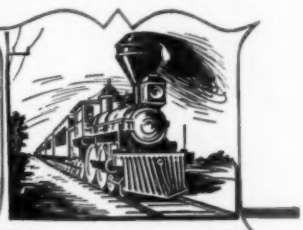
Perhaps it is the touch of auburn in her hair, perhaps the drive and enterprise that she inherited from her father, whatever the source, one does not talk very long with Miss Viall before it begins to become apparent why the Viall business increased five fold during the time she has been associated with firm. There were seven horse drawn wagons in 1924 when she came aboard. There are thirty-four trucks flying the Viall colors today. It didn't happen by accident.

You visit Viall's and you come away with the feeling this is how it should be done. You see a sales

(Please Turn to Page 69)

ESTABLISHED 1873 • NEARLY EIGHTY YEARS OF HONEST EQUIPMENT

CATTARAUGUS
In this little rockbound community of Western New York, conscientious workmen still produce milk-handling equipment with "quality built clear through." No wonder that PURITY machinery has become well and favorably known the world over.



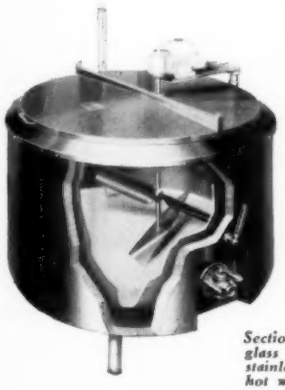
PURITY DELUXE

The Aristocrat of Pasteurizers

LARGER—heavier—finer—with all exposed surfaces glittering stainless steel—that's the real reason why this genuine aristocrat is the kind you put in your "show plant"—the kind your visitors exclaim about!

But this fine and durable little blue-blood is only one of a whole line of pasteurizers and other high-grade milk-handling equipment built "just a little better than seems necessary" by conscientious, expert, life-time Cattaraugus craftsmen.

In fact, the year 1950—the very core and center of the Twentieth Century—marks the resumption of PURITY ownership by a committee of the former management who on December 19th, 1949, repurchased the business, "lock, stock and barrel." Consequently, under the trade mark and name which have already become famous the world around, the PURITY Manufacturing Company, Inc., will uphold former standards of quality and workmanship, but with the latest improved methods.



Sectional view showing one-inch pure fibre glass insulation. Inner vat of polished stainless steel is entirely surrounded with hot water, making fast heating possible.

So purchasers of top quality equipment from Oakes & Burger Company, Inc., will again be able to secure "that Cattaraugus quality" with "honesty inbuilt clear through." And the slogan, **"Nearly Eighty Years of Honest Equipment"** will draw added significance as PURITY research keeps PURITY equipment abreast and ahead of the latest developments of this fast-changing century.

PURITY MANUFACTURING COMPANY
OAKES & BURGER CO., INC., *Sole Distributors*
CATTARAUGUS, NEW YORK, U. S. A.

PURITY

MILK HANDLING MACHINERY AND EQUIPMENT

Greatest Advance in Milk

The NEW Buck "MINI"

IMMEDIATELY AVAILABLE

Here is a newcomer that is destined to make milk bottle history, the same as the original square bottle which we introduced 10 years ago. It gives you all the features you've always wanted in a milk bottle and . . . it saves you money.

The Buck "MINI" Bottle is not just an old bottle with a new shape. It is an all new bottle, scientifically engineered from top to bottom.

This new bottle is designed to *absorb* stresses and strains instead of resisting them. It is a strong bottle. It has been tested and proven in our laboratories and by use in dairies. This "new thinking" in milk bottle manufacture eliminates excess dead-weight glass without sacrificing any useful features. It gives a bottle that is stronger, lighter and more economical . . . advantages that have a dollar and cents value in the daily operation of every dairy.

THE BUCK GLASS

Originators of the

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Containers in Years!

HALF PINT" Bottle

This Shoulder Tells the Story

In the Buck "MINI" Bottle, a scientifically designed shoulder contour replaces the heavy bumper ring. This new shoulder acts as a guide for capping machines and a stop on the washing machine pockets. It also eliminates the need for excess glass and makes possible a uniform, light-weight distribution of glass from the top of the bottle to the very bottom. In addition, it is less top heavy throughout your entire operation.

Write for a sample of the new Buck "MINI" Bottle. Examine it! Test it! See how *LIGHT* it is. See how *STRONG* it is. Then figure up how much this saving in weight, space, and original cost can save you in a year.

A Few Quick Facts about the Buck "MINI" HALF PINT Bottle

- Lower initial cost.
- Lighter weight for economical handling.*
- Saves space and saves money.
- Fills fast to speed up production.
- Designed for low capping cost.
- Completely adaptable to individual decoration.
- Ideally suited for school and restaurant trade.
- Will also be available through other milk bottle manufacturers.

*An entire gross weighs only 40 lbs.

COMPANY

Square Milk Bottle

BALTIMORE 30, MD.

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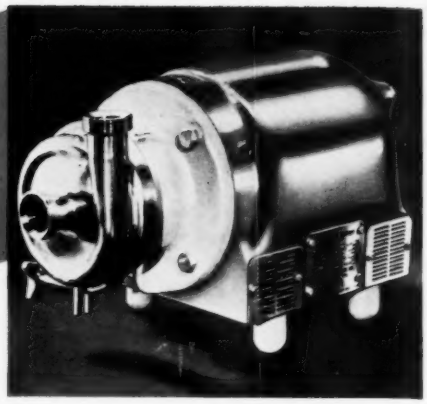
PUMPING MILK AND CREAM



Photographs courtesy
Cherry-Burrell Corporation

By E. L. FOUTS

SANITARY PUMPS are absolute necessities in even the smallest efficiently operated milk or dairy processing plants. Pumps are used in many places in the plant for the movement of milk and other fluid dairy products from one place to another through sanitary pipe lines. The cost of operating and maintaining pumps is more than offset by the labor saved.

The use of milk pumps, however, is not without limitations. Much damage may be done to cream-line milk by the improper use of pumps. A pump of incorrect capacity may be responsible for foaming when homogenized milk is being pumped. A thorough knowledge of pumps and their limitations should be useful to every dairy plant operator.

Pumps for handling milk must be of special design to permit easy and thorough cleaning and sterilizing, they must be constructed of metals which will not impart a flavor to milk, and they must operate with a minimum of foaming and churning of the product.

Pumps for handling milk and other fluid dairy products may be divided into two general classes. (1) The positive displacement type, such as a piston or rotary-type pump which moves a practically constant amount of fluid irrespective of head pressure – these pumps are capable of building up sufficient pressure to burst a sanitary pipe line in case the discharge valve is closed if the motor doesn't stall. (2) The non-positive type, such as the centrifugal pump, which creates a relatively low pressure; with pumps of this type the output decreases as the head pressure is increased and the discharge valve can be closed without building up excessive pressures.

Piston-type pumps powered by steam may be found in some condensaries and milk powder plants. They are satisfactory for this purpose, but in many newer installations more modern gear-type positive pumps have been installed.

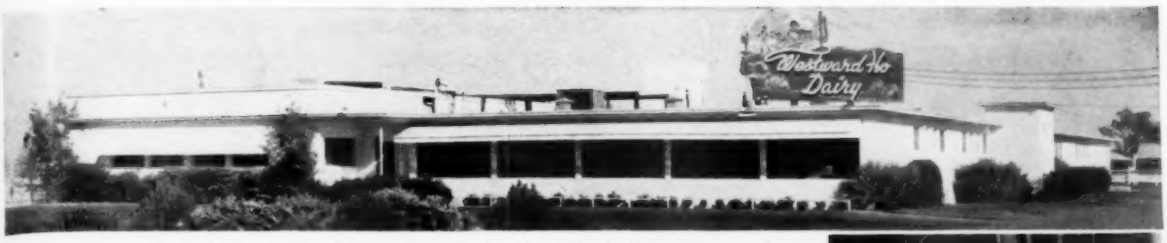
The gear-type or rotary pumps provide a uniform flow of product, are simple in construction, easy to dismantle and clean, and will work against variable head pressures without materially affecting the output. Some slippage of product resulting in lower pump capacity may be experienced after such pumps have been in service for long periods of time. Wearing down of the close fitting gear parts is the cause of this loss of capacity.

Centrifugal pumps are the type of pumps most commonly used in milk plants. These pumps have a rotating impeller which operates at a set speed, usually high, by being directly connected to an electric motor. These pumps are very simply constructed, easy to disassemble and clean, do not develop much pressure, are low in cost, and are satisfactory for many uses in the milk plant.

Homogenizers and viscolizers being manufactured and used today employ a triplex pump (3 cylinders) to develop the high pressure required by the homogenizing processes. This type of pump mechanism is particularly adaptable for use in connection with the homogenizing valve because of the uniformity of pressure developed by overlapping of the pressure application by the three pistons. The three cranks are set at an angle of 120° to each other and are set in such a manner that the strokes overlap so that the variation between the maximum and minimum pressure is only about 20%. To further reduce the variation in the pressure, small diameter pistons are used which run at a fairly high rate of speed.

E. L. Fouts, Head of the Department of Dairy Husbandry and Dairy Manufactures at the University of Florida, is a new comer to the pages of the American Milk Review. To a host of dairymen, however, particularly in the South, he is known as a careful student of dairy problems and an ardent crusader for a better industry. In this article, written exclusively for the American Milk Review, he presents an able discussion of the important problem of milk and cream pumps. This is the first of two installments.

XUM



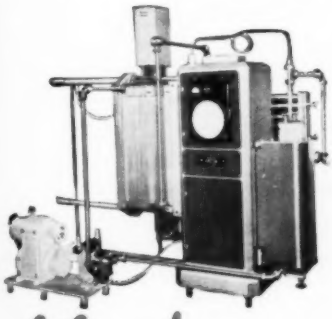
Westward Ho, Phoenix, Arizona, is one of the most modern and attractive dairies in the Southwest, operating exclusively in Electro-Pure Pasteurized and Pure-Pak packaged milk and other dairy products.

It's "Electro-Pure" at Westward Ho

The Westward Ho dairy's Electro-Pure Model 85 Pasteurizes 8500 lbs. of milk per hour by the all-electric short-time method.

WITH celebrities from all over the world coming to Phoenix and its famous climate, Westward Ho aims to give the best possible milk and service. That's why this progressive dairy selected Electro-Pure, the first all-electric short-time Pasteurizer, for processing its Grade-A milk, packaged on a Pure-Pak "Senior" machine.

Jo Ann Watson gets her day's supply of Electro-Pure Pasteurized milk in Pure-Pak containers from Jack Smith, Westward Ho retail driver.



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The 7 Electro-Pure models range in capacity from 2000 lbs. and 930 quarts per hour to 10,000 lbs. and 4651 quarts per hour. The range of capacities will take care of practically any dairy requirement (packaging either in paper or glass) with either a single or multiple installation.

Model	CAPACITIES Lbs. per hr.	Qts. per hr.	Model	CAPACITIES Lbs. per hr.	Qts. per hr.	Model	CAPACITIES Lbs. per hr.	Qts. per hr.
No. 20	2,000	930	No. 40	4,000	1,860	No. 85	8,500	3,952
No. 30	3,000	1,395	No. 60	6,000	2,790	No. 100	10,000	4,651
			No. 75	7,500	3,488			

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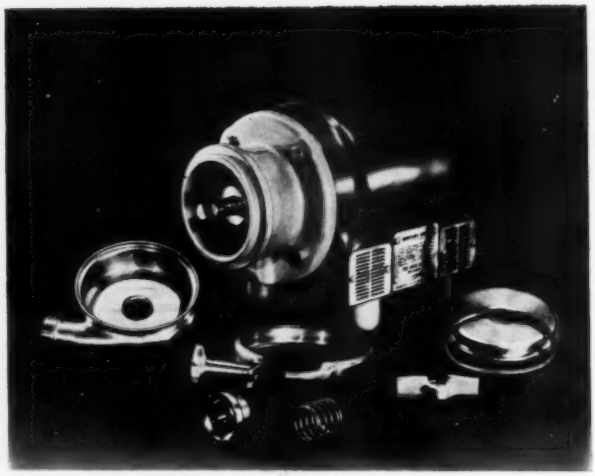
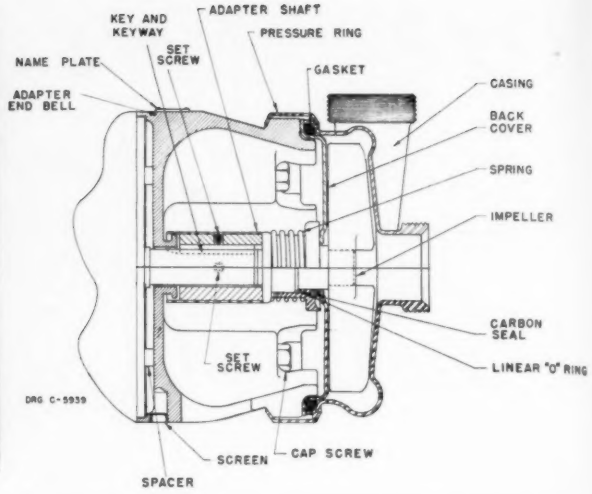
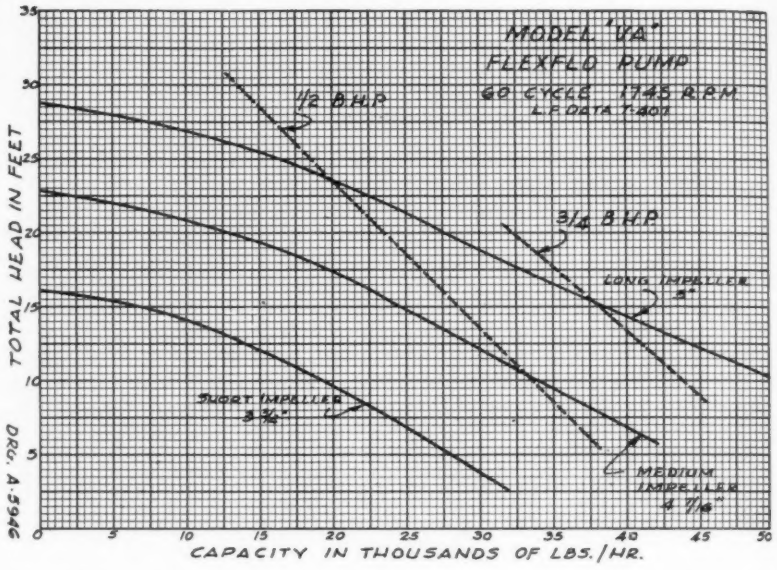




The photograph and diagram show the parts of the centrifugal type of pump. Chart at right shows how the capacity of this pump varies with the length of the impeller.



A triplex pump is reasonably simple to maintain and keep in satisfactory operation. The pistons are packed from the outside and the packing can be replaced without too much difficulty. The pump portion of modern homogenizers, except small sizes, generally is totally enclosed, including the motor, belts, gears, and other moving parts.

When contemplating the installation of a pump for the handling of milk, cream, or any other dairy product, it is of great importance that due consideration be given to the capacity of the pump as related to the amount of product to be handled. Centrifugal pumps for the most part are manufactured to handle definite quantities of product, and if a pump is secured which is larger than is needed for the job to be done, regulating valves must be placed in the line to control the quantity of milk or cream passing through the pump or the impeller must be changed or trimmed. Under the very best conditions this is undesirable and oftentimes is responsible for body and texture defects in both milk and cream. Arrangements should be made to install pumps of such a size that restricting the flow by valves may be held to a minimum.

If existing centrifugal pumps which are of too great a capacity must be used, and a valve is to be used, the valve should be placed in the sanitary line on the discharge side of the pump and the flow of product regulated by adjusting this valve. In no case should the adjusting valve be on the suction side of the pump. This may starve the pump of milk and cause very severe agitation of the product passing through it.

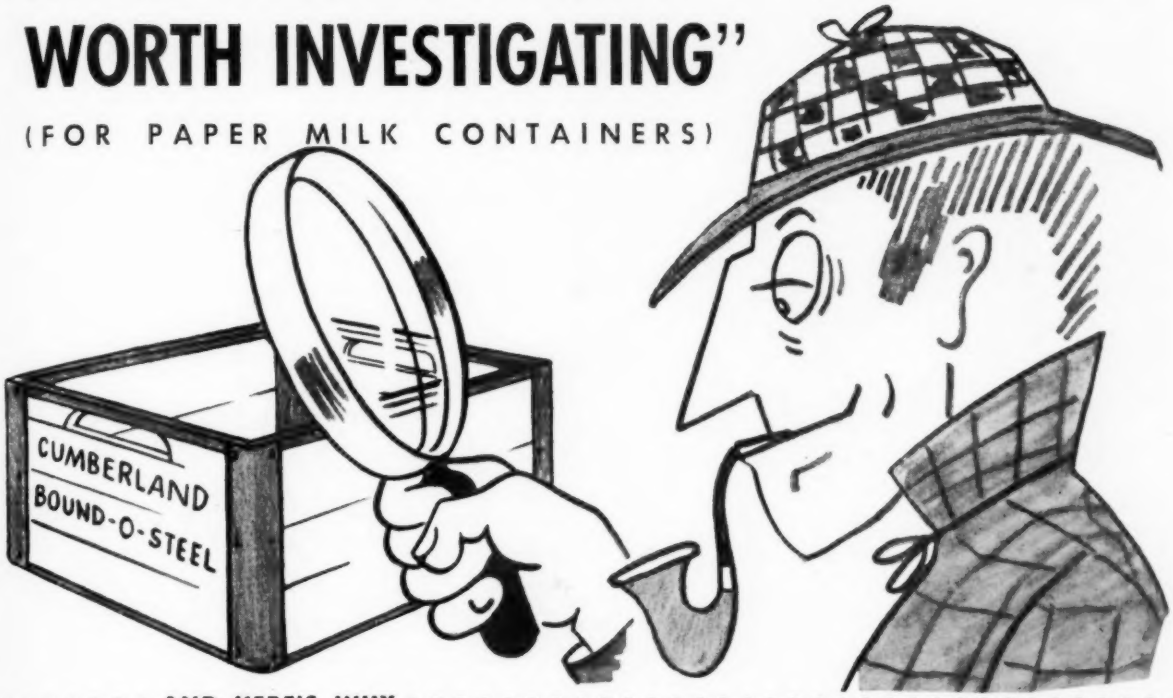
Some types of centrifugal pumps are constructed in such a manner that the impeller of the pump can be adjusted in length, depending on the requirements, which enables the operator within certain limits to adjust the pump to a rate of flow which will suit his needs.

Positive pumps with a variable speed arrangement are the answer to the problem discussed above, but in many instances, especially in the smaller dairies, the operator does not feel justified in spending several hundred dollars for a variable speed positive displacement pump when he can get by with a direct drive centrifugal pump costing much less.

The damage to milk caused by pumps of incorrect size where the flow must be throttled is to the cream layer, which may be shortened by the abuse of the pump. This is a problem of a cream plug formation, due to agitation greater than the milk can withstand without some churning of the butterfat. When the fat churns into small granules of butter, these granules rise to the top of the milk on standing and then after some period of time in cold storage a tough leathery layer of churned fat forms on the top of the bottled milk. This cream plug may vary in intensity from only a very slight thickening of the very top surface of the cream layer to a hard plug of coalesced butterfat extending half way down through the cream layer. The same difficulty is encountered in the pump-

"HMM—HERE'S A CASE WORTH INVESTIGATING"

(FOR PAPER MILK CONTAINERS)



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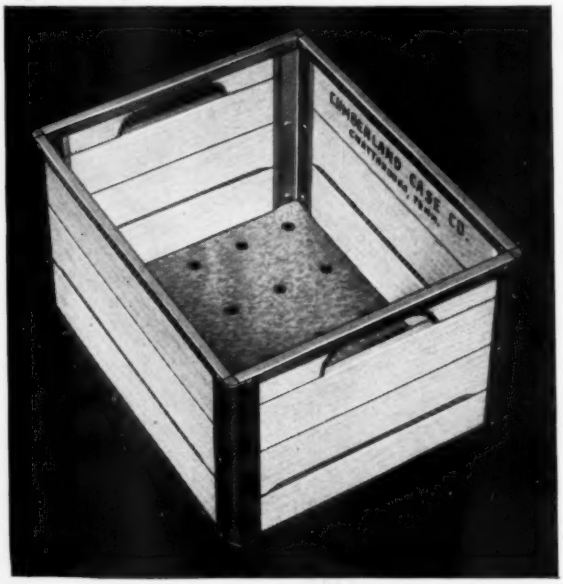

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12 Quart (18 Pint or 24 Half Pint) Containers
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**There is a Cumberland Case for every requirement. See your jobber or write us direct for descriptive literature.*

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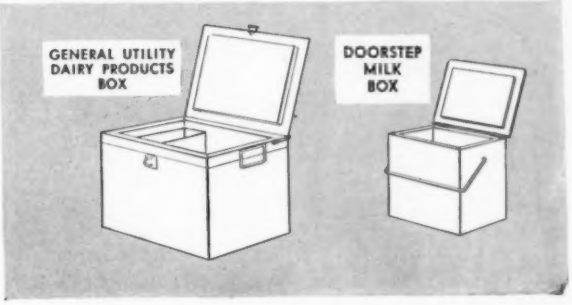

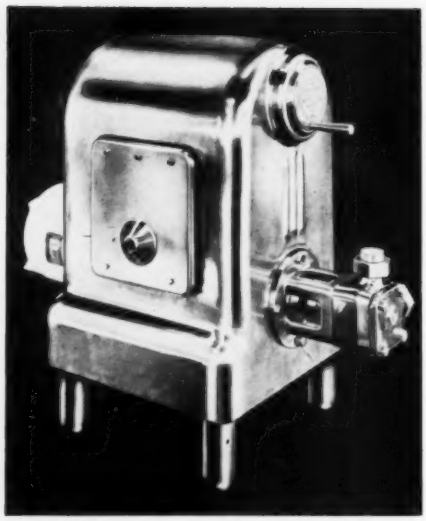

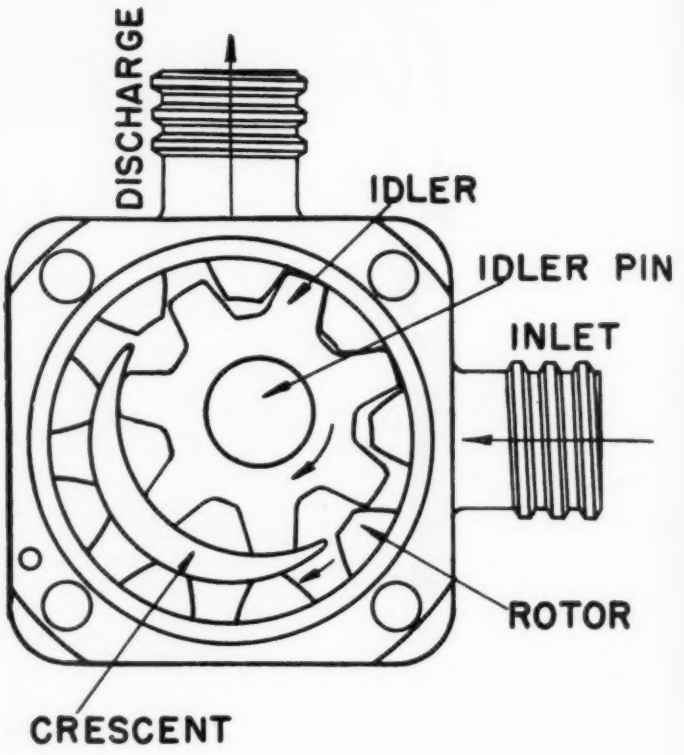

The positive displacement type of pump moves a constant amount of fluid without regard to head pressure. Meshing of gears forces product into discharge line.

ing of cream to be used for bottling purposes, and because of the increased amount of butterfat, in the cream the chances for a defect to occur are much greater than when milk is being pumped. The more butterfat contained in the cream the greater the tendency to churn and the greater the probability of cream plug forming on the bottled product.

The temperature of the product at the time of pumping is a very definite factor relating to the churning of the fat. The fat in milk or cream coalesces and turns into granules of butter much more rapidly when it is in a solid or semi-solid state than it does when in a liquid state. Low temperatures also decrease the tendency for milk or cream to churn when unduly agitated. To guard against churning, then, the temperature of milk and cream should be kept low (40° F.) or well above the melting point of the fat during the pumping process. It is a common practice to pump milk from the receiving room at temperatures ranging from 38°-45° F. with very little damage with either positive or non-positive type pump. The melting point of butterfat varies considerably throughout the year due to variations in feed of the cow. To make certain that the fat is in a melted condition at the time of pumping a temperature of at least 125° F. should be maintained during the pumping processes, if the product is to be pumped warm.

Oxidized or metallic flavors in milk and other dairy products are usually due to exposure of the product to iron or copper, somewhere in the processing of the product. Cases of oxidized or metallic flavors have been traced to passage of milk through pumps constructed of a metal other than stainless steel. Some milk products are highly susceptible to the development of these off-flavors and the presence of a very small amount of metal, such as a bronze bearing, might be sufficient to give the milk an oxidized or metallic flavor. Many present day pumps have the entire surface to which the milk is exposed constructed of stainless steel. This is very desirable and in a purchase of a pump one should give consideration to this matter because failure to do so may give rise to serious trouble from the standpoint of milk flavor.

A milk plant employing several pumps in its everyday operations will in all probability require more than one size pump. It is desirable wherever possible to standardize on the size and the make of pumps in order to avoid the necessity of keeping spare parts for a variety of makes and sizes of pumps. If a number of pumps in the plant are alike, relatively few spare parts and motors will need to be kept in stock for emergency use. It is a simple matter to replace a motor or any pump part when trouble develops if a supply of parts are on hand. A stock of parts under such conditions is quite inexpensive and will pay off in time and labor saved when breakdowns occur.

It has been the experience of the writer that the motors on milk pumps in dairies or milk plants are one of the sources of major trouble and causes for many delays in the processing of milk. This condition is due to the everyday use of water around the pumps in the cleaning up process and frequently, of course, is due to the carelessness of employees in directing a stream of water from the hose too near the pump motor or in some cases directly onto it. Vaporproof and waterproof motors are now available in the small sizes which are required to operate even the smallest pumps in the dairy or milk plant. The cost of these motors is approximately 50% to 75% more than the ordinary motor such as is used on milk pumps. It is my recommendation that when it is necessary to buy new motors for pumps or to buy new pumps, that waterproof motors be specified. The additional expense will be more than offset by the additional life of this type of motor.

Here's Milk Protection and Profit Protection
for 300-can-per-hour Plants . . .

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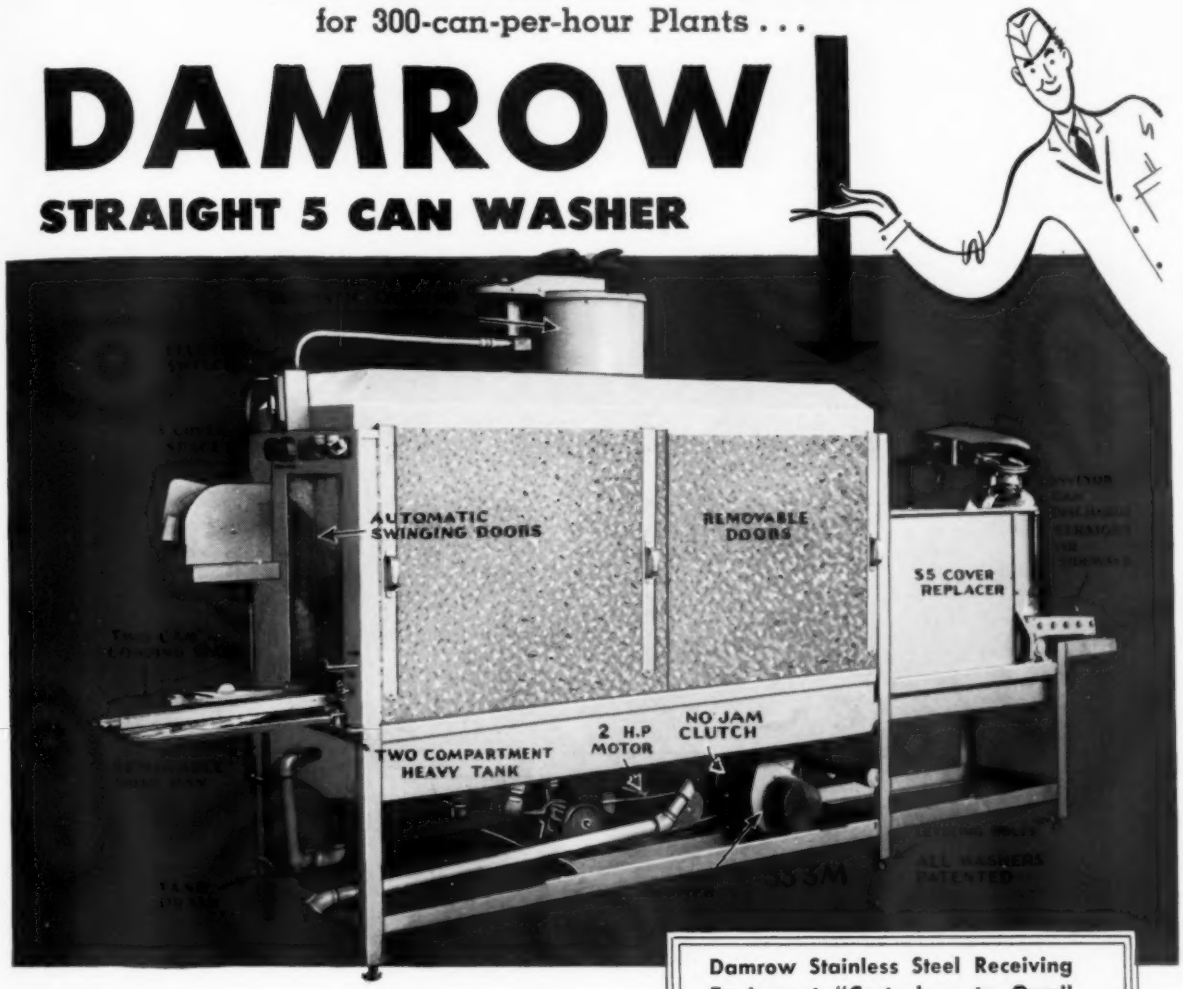
STRAIGHT 5 CAN WASHER



Capacity **5 cans and covers per minute**

With a DAMROW Can Washer, you can be *sure* you're returning cleaner cans to your patrons — the kind that protects the milk quality *they* deliver to you. Tests prove that milk cans coming out of the DAMROW washer, with its effective washing stages and COLD AIR DRYING, are lower in bacteria count — much lower than even Health Authorities' minimum demand. Add to this vital advantage the savings which Damrow washers offer in time, labor, power, and water — and longer trouble-free service — and you see why a Damrow Washer is a "profit-protector" in hundreds of plants everywhere.

Write for latest bulletins of Damrow Straight 5 Can Washer (5 cans per minute), Straight 4 (4 cans per minute) or other models to fit your needs — in capacities up to 16 cans and covers per minute.

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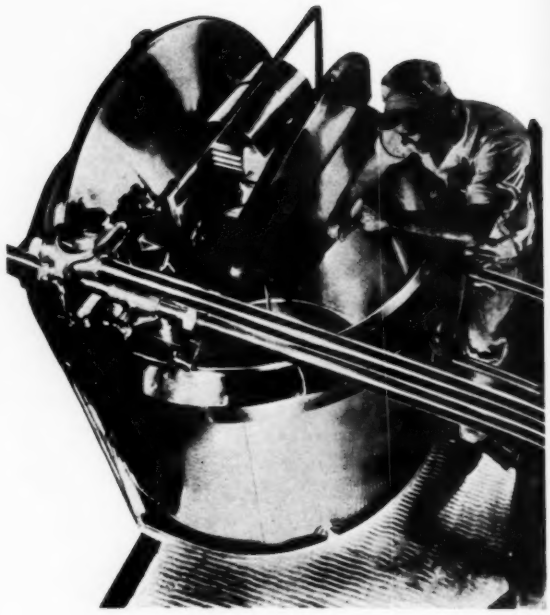
COMPLETE EQUIPMENT FOR THE DAIRY INDUSTRY

The Care of

Stainless Steel Dairy Equipment



By R. E. PARET

American Iron and Steel Institute

THE HIGH SUSCEPTIBILITY of dairy products to contamination and deterioration has made it necessary to maintain rigid control of sanitary conditions in each phase—from collection of raw milk to the delivery of products to ultimate consumers. Particularly, attention has been focused on the processing and handling operations.

Milk flavor is easily affected by metallic contamination, an effect that is intensified when the product is subjected to irradiation. Stainless steel, however, does not affect milk flavor and, consequently, is particularly suitable for use in irradiating units.

The worth of stainless steel has been established wherever milk or milk products come in contact with metal; it does not affect the product, nor do dairy products affect the metal when it is kept clean. Thus, we find stainless steel used in dump tanks, weigh tanks and receiving vats, in the filters, in heat exchanging units of both the plate and tube types, in the storage and holding tanks, pasteurizers, homogenizers, buttermilk machines, coolers and surge tanks, and, finally, in the filling machines in fluid milk plants.

For cheese vats it is unexcelled because no discoloration or alteration of flavor will result in the product regardless of the length of time it remains in contact with a stainless steel surface.

The Technical Committee of the Dairy Industry Supply Association, Inc., in cooperation with engineers affiliated with producers of stainless steel and fabricators of stainless steel equipment, has approved the following suggestions for cleaning and sterilizing stainless steel equipment used in the dairy industry.

It should be remembered that stainless steels, far from being delicate in nature, require precautions only to lengthen their useful life. These rules are designed to enable the user of stainless steel equipment to get additional value from an already proven metal.

CLEANING

Immediately after emptying, rinse the equipment thoroughly with clean, COLD water to remove as much of any adhering material as possible before it dries. Continue to rinse until the walls are cooled down. Keep covers closed after rinsing until ready for thorough cleaning.

Clean with warm water and a commercial dairy cleaner (as recommended by its manufacturer for use with stainless steel) brushing all surfaces thoroughly to remove ALL adhering materials. This is important because an adhering particle if allowed to remain for an appreciable length of time may cause a pit to develop beneath it due to electrolytic action.

Stubbornly adhering material may be removed with a stainless steel sponge or wool which is obtainable from any supply house. Do not use ORDINARY STEEL WOOL as particles of the steel will break off and rust on the surface of the stainless steel equipment.

Wash thoroughly with hot water after cleaning and allow equipment to dry.

STERILIZATION

Sterilization should be carried out just before the equipment is to be used. Heat sterilization is most easily accomplished by filling with water, maintaining the temperature at 170 to 180 degrees F. for five minutes. A steam hose may be suspended in the water, but care must be used so that steam will not play directly on vat walls or bottom. In extreme cases, this may cause localized overheating with consequent distortion or strain.

Heat sterilization may also be accomplished by live steam for five minutes but, for the same reason, do not

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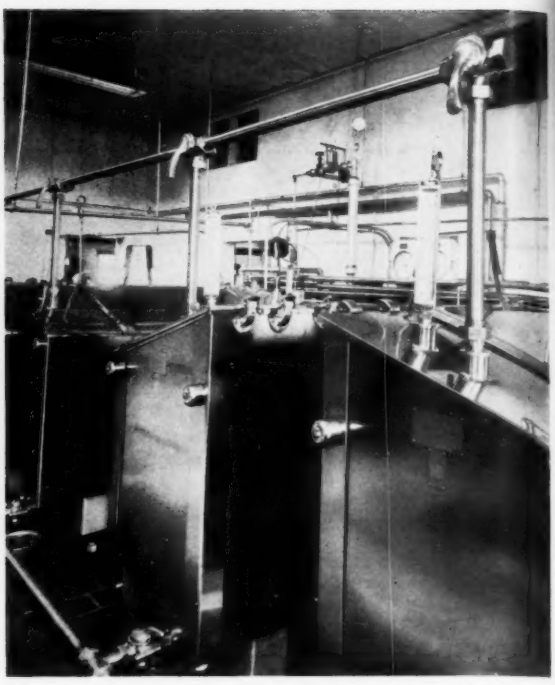

The fact that stainless steel does not alter the delicate flavor characteristics of dairy products plus its ability to stand the wear and tear of dairy plant use makes it a highly desirable material for milk processing equipment.

allow the steam to strike directly on the walls or bottom. Keep the end of the steam hose at least 18 inches away.

Chemical sterilization with a solution of chlorine or other germicidal agent is preferred, particularly for storage tanks. Concentrations up to 200 parts per million of free chlorine are considered adequate. One much used regulation is that the excess which runs off or collects in equipment must test 50 parts per million.

These solutions brushed or sprayed on parts MUST NOT BE ALLOWED TO REMAIN in contact with stainless steel over two or three hours, otherwise pitting and corrosion of the surface will result. If equipment is not to be used promptly after sterilizing, flush thoroughly with clean cold water.

DON'TS

1. Don't use ordinary steel wool, particles may break off and become imbedded in the stainless steel.
2. Don't use water supply containing iron, salt, or sulphur.
3. Don't allow chemical sterilizers, alkalies, or cleansers to remain on equipment for long periods.
4. Don't allow particles of foreign matter to adhere to equipment.
5. Don't allow rubber protective items which are fitted over stainless steel surfaces, to remain on such surfaces for any length of time. They exclude air and prevent the surface from drying thoroughly.
6. Don't allow wrenches, sanitary fittings, or other dissimilar metal parts to lie on stainless steel surfaces which remain wet.
7. Don't close the covers of a tank after steaming unless a vent is provided. A vacuum may be created which can collapse the tank.
8. Don't apply air or steam pressure unless equipment is specifically designed for such pressures.

Rust, discoloration, or pitting may result from disregarding any one of the first six don'ts listed above.

GIVE THAT MAN EIGHT COPPER PENNIES

Last month your editor was more than a little baffled by the term soroptimist. We encountered this word in the course of relating the story of Mrs. Alyce Saunders, president of the Rosebud Creamery in Detroit. We offered a reward of eight cents for information leading to the discovery of the meaning of the word.

After carefully evaluating the replies to our offer, of which there were two, we have decided to give the full value of the award to both parties. Accordingly to both Mr. Albert Frank of Detroit, Michigan and to Mr. John E. May, Pure Creamery Company, Laurel, Mississippi we have despatched eight cents in stamps. However, for purposes of glory we must admit that Mr. May deserves some slight measure of credit over Mr. Frank's effort. Mr. Frank, you see, is Sales Manager in the same shop where Mrs. Saunders works at being President.

Soroptimist, by the way, is the name of a business and professional women's service club, a sort of feminine Kiwanis Club. It comes from the Greek "soro" meaning sister and optomist meaning—well, optimist. Mr. May's solution was "a woman optimist". Anybody got a better one?

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BOTTLE MAKER for the DAIRY INDUSTRY

Ever since Dr. Hervey D. Thatcher invented the first glass milk bottle — 65 years ago — Thatcher has been the dairy industry's "bottle maker". Thatcher Glass has helped to speed the progress of the dairy industry by producing sanitary glass milk bottles that are better designed, stronger and lighter in weight. The glass milk bottle is an important factor for economical distribution of fluid milk . . . bringing pure wholesome milk packaged the way the customer wants it — and at lowest possible cost.

Only because of Thatcher's constant improvements in bottle manufacturing methods has it been possible to supply the exacting milk bottle requirements of the dairy industry. Dr. Thatcher's original hand-blown glass milk bottle weighed about two pounds and cost more than 10c apiece; modern, machine-made streamlined Thatcher Glass milk bottles weigh and cost only half as much as the original glass milk bottle, because of a series of triumphs in bottle-making skill and engineering-design. Whatever type glass container has been needed by the dairy industry, Thatcher Glass has produced it.

The milk bottle to help you keep your dairy ahead is now being made by Thatcher Glass. Ask your Dairy Supply Jobber to furnish you Thatcher milk bottles or write direct.

THATCHER GLASS

MANUFACTURING COMPANY, INC.

Elmira, N. Y.

XUM

EDITORIALLY SPEAKING . .

AN ENCOURAGING TREND

THIS ISSUE OF the American Milk Review carries a story on a nation-wide campaign to sell milk sponsored by the Sealright Corporation. The campaign has its basis in the conviction that the more milk sold the better will business be for the supply and equipment business.

In New York State there is an organization called Milk For Health. It is primarily a producer organization and its purpose is to stimulate the consumption of milk by the general public. It is rapidly gaining strength and promises to be a real factor in the business of selling milk.

In California the cling peach people are working with the American Dairy Association to sell both cottage cheese and cling peaches by promoting an attractive salad that uses both products. There is a superb opportunity for similar work in the cereal field, in baking, in various chowders and soups.

These are encouraging developments.

The milk business is a team composed of three elements, the producers, the supply and equipment people, and the processors. All three elements are essential. No single element can operate without the other two. Each depends upon the other. It is heartening, therefore, to see tangible evidence of practical cooperation.

Much remains to be done. Remarkable progress has been made in the technical phase of the milk business. Equipment has been developed to a high degree of efficiency. Processing techniques have advanced. Production is good and from all indications will get better. Yet when milk selling techniques and efforts are compared with those of other commodities there is room for a vast improvement. On a dollar for dollar basis the amount spent on selling milk is ridiculously small alongside of the vast sums spent by the tobacco hucksters for example.

Here are figures compiled by the American Dairy Association showing the amounts spent for advertising a selected group of foods:

Butter	$ 516,500
Milk	1,400,000
Ice Cream	1,670,000
Cheese	2,900,000
Evaporated Milk	3,380,000
Oleomargarine	6,600,000
Cereals	20,000,000
Soaps, Flakes, Cleansers	57,400,000
Coffee, Tea and Instant Coffee	16,400,000
Beer	17,600,000
Soft Drinks	12,200,000
Cigarettes	35,700,000

It is not difficult to envisage a carefully integrated program backed by producers, processors, and suppliers selling milk on a nation wide scale. Perhaps the commendable action of the Sealright Corporation and the New York producers is a step in that direction.

●

STAND UP AND BE COUNTED

OF ALL THE WORDS known to editors the saddest of all is "Don't quote me". Again and again and again as we travel hither and yon in pursuit of our calling we encounter that strange situation. This is what I believe, a dairyman will say. This is what I think. This is what ought to be done. *But don't quote me.*

We have talked with dozens of dairymen who harbored opinions on the oleo-butter controversy that did not hew to the party line but they didn't want to be quoted. We have visited with men who were doing an outstanding job of quality production but they didn't want their names mentioned. We have visited with men who were about to come to grips with the federal government but they didn't want to be quoted. Lately we have run across a group of dealers who stand to lose their industry to a municipal milk plant. By dint of persuasion and the judicious use of TNT we pried loose a few cautious words. But the dominant feature of dealer conduct in this case as in others is a remarkable reticence to stand up and be counted.

One of our readers writes to us from time to time in a brilliant earthy style that leaves no doubt as to his position. His custom is to take two or three pages of a letter to give us the back of his literary hand. They are masterpieces of mind speaking, those letters. The gentleman not only calls a spade a spade, he is quite definite in stating that it is a very dirty shovel. Yet at the top of each letter appears the legend "not for quotation or publication".

This is not a healthy state of affairs. Who is going to speak for the dairy industry if the dairy industry doesn't speak for itself? How is the public going to get the industry's point of view, going to get the industry side of the story, if dairymen are afraid to stand up and be counted? The boys that would beat off our ears are not afraid to talk. The planned economy sharp shooters are not hiding under any bushel baskets. The gentry that would put the dairy business in an economic straight jacket are not noted for their reticence when it comes to pitching the poison tipped verb.

The milk business is a touchy affair. Presumably the hesitancy over speaking out stems from a conviction that it is better to let sleeping dogs lie. As our industry thrives and our businesses grow we tend to become conservative. At the Battle of Jutland Admiral Jellicoe was severely criticized for his conservative tactics, tactics that stood in sharp contrast to the daring operations of his German opponent. The trouble was that Jellicoe was more concerned with keeping his fleet intact than he was in destroying the German armada. As a result he let the great opportunity slip from his grasp.

The age and the times call for leadership. The time is long since past when there is any profit in wishful thinking. You cannot wishful think a hydrogen bomb. You cannot wishful think the rising role of government in our daily affairs. You cannot wishful think economic morality or union monopoly or municipal milk plants. Dairymen must stand up and be counted or lie down and be counted out.

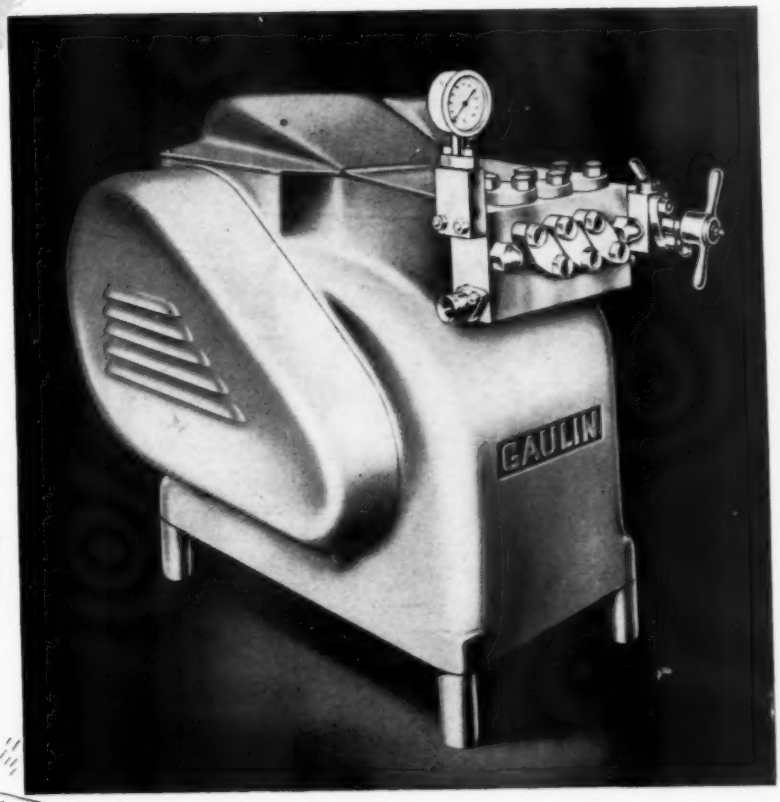
We recall with a thrill the stirring words of Robin Hood as he and his

(Please Turn to Page 69)

XUM

ACTION SPEAKS LOUDER...

You PROFIT with GAULIN Two Stage Homogenizers



IN city after city sales of homogenized milk continue to rise . . . in fact, records show that they exceed unhomogenized milk. These increased sales mean more and better returns to the dairymen.

And in dairy after dairy more Gaulin Two-Stage Homogenizers are used than all others combined. The reason . . . Gaulin Homogenizers meet all the requirements needed for fast, economical homogenization. They are sturdily constructed of the finest materials to give long life. They are absolutely sanitary . . . easy to keep clean. The famous Gaulin original two-stage valve assembly assures maximum product uniformity.

No matter what you homogenize . . . milk, cheese, ice cream, evaporated milk or other dairy products . . . the Gaulin Homogenizer is your best buy from every angle — processing, product uniformity, profits.

MANTON GAULIN
Manufacturing
COMPANY, Inc.

Gaulin
TRADE MARK

Get the PROFIT Building Facts

Write for the 24-page Bulletin No. 830. It gives you complete facts on Gaulin Homogenizers. Shows you why Gaulin Homogenizers are your best buy!

49 GARDEN STREET, EVERETT 49, MASS.

Buildings & Budgets

By FRED DEGENHARDT

SEVERAL LETTERS that I have received contained questions with reference to waterproofing of floors. Rather than answer each one individually I feel a general discussion of this subject will furnish the information requested.

The purpose of waterproofing floors is to prevent water leakage from one floor to the floor below and water damage to the building. There are various ways to do this but, in the writer's opinion, a good 3 or 5 ply membrane waterproofing job is the best "buy" to prevent high maintenance costs. Any initial savings made by installing inferior waterproofing will be paid out over the years in expensive repair work. If your building budget must be reduced look for other ways of paring it. Why? Because waterproofed areas are usually equipment areas. When leaks become evident it generally means tearing out a considerable amount of floor finish to reach the waterproofing and find the leaks. During the processing and clean-up operations work of this kind is very difficult and usually ends up in overtime. Or, as I have seen in many plants, a drip pan with a pipe to the floor is hung below the leak and then forgotten. Initially, this is the least expensive way to get rid of the wet spots on the floor below, but like the ostrich with its head in the sand, what is happening overhead is not seen. Recently this was brought out very strongly when my attention was called to a condition which turned out to be not only dangerous but very expensive to repair.

Fred Degenhardt is a specialist in the design, construction, and maintenance of dairy plants. Seven years with the Engineering and Planning Department of Bordens plus four years with Sheffield Farms have given his twenty-one years as an architect a decided dairy flavor. Last July he opened his own office at 31 Union Square West in New York where he concentrates on but does not limit himself to dairy work. His column will appear in the American Milk Review every other month. Address your questions to him at his office.

Concrete On the Bottle Filler

Several good size pieces of concrete came crashing down from the ceiling in a plant. This alone was dangerous but fortunately no one was injured. Investigation revealed that a large number of the reinforcing rods in the structural concrete slab were rusted through because of waterproofing leaks which had not been repaired. The pressure exerted by the rust made the concrete spall or break off. Spot checks were made of the structural beams and girders by removing portions of the concrete fireproofing and it was found that a number of beams and several girders were rusted so thin that a blow of a machinist's hammer punctured the web of a 16″ I beam. The decision of a group of architects, engineers and contractors was that the structural value of the floor was gone and the floor must be replaced *immediately.*

The area above was an equipment area and to replace the floor meant relocating the entire operation. Preparation of another area and relocating of the equipment piece by piece to avoid a shutdown was too long a procedure. It was necessary to support the concrete structural slab, beams and girders temporarily on a forest of wood posts until the new area was prepared and the equipment installed. The expense was terrific. Over a million quarts of milk had to be sold to pay for this repair. This may sound like an extreme case but I have seen such a condition more than once.

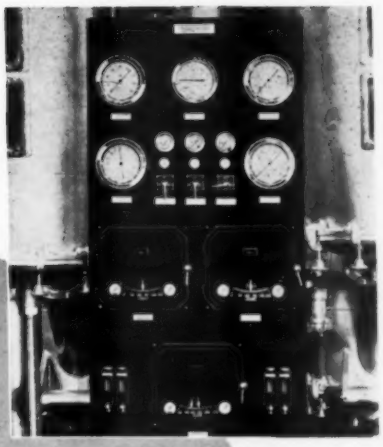
Good Waterproofing

A good membrane job of 3 or 5 plies of 15″ felt properly laid in asphalt or pitch, (asphalt in low tem-

XUM

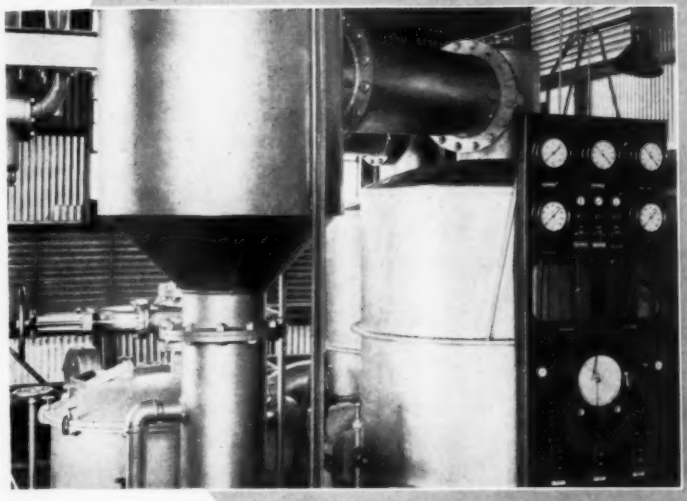
AUTOMATIC CONTROLS

Simplify Operation
Stabilize Production



Automatic Control Panel for a Buflovak Double Effect Evaporator.

Buflovak EVAPORATORS



Automatic controls on Buflovak Evaporators assure efficient, dependable operation. These remarkable instruments automatically maintain correct milk levels in ALL EFFECTS. Any desired change in milk level can be made quickly by a simple panel adjustment. The operating temperature, too, is kept constant by controlling flow of water to condenser. Instruments make corrections for the slightest change in pressure or temperature. Both automatic and necessary manual controls are conveniently arranged on an attractive panel board correctly located for easy observation. Automatic control is just one of the many reasons it's profitable to install a Buflovak Evaporator. Remember, Buflovak affords a 50% saving in steam and cooling water in double effect operation . . . a 67% saving in steam and an 80% conservation in triple effect operation*. All Buflovak Evaporators recover more than 99.9% of solids.

*Equipped with Vapor Milk Heaters. All savings are in comparison to single effect operation.

THE *Buflovak*
ROLLER DRYER

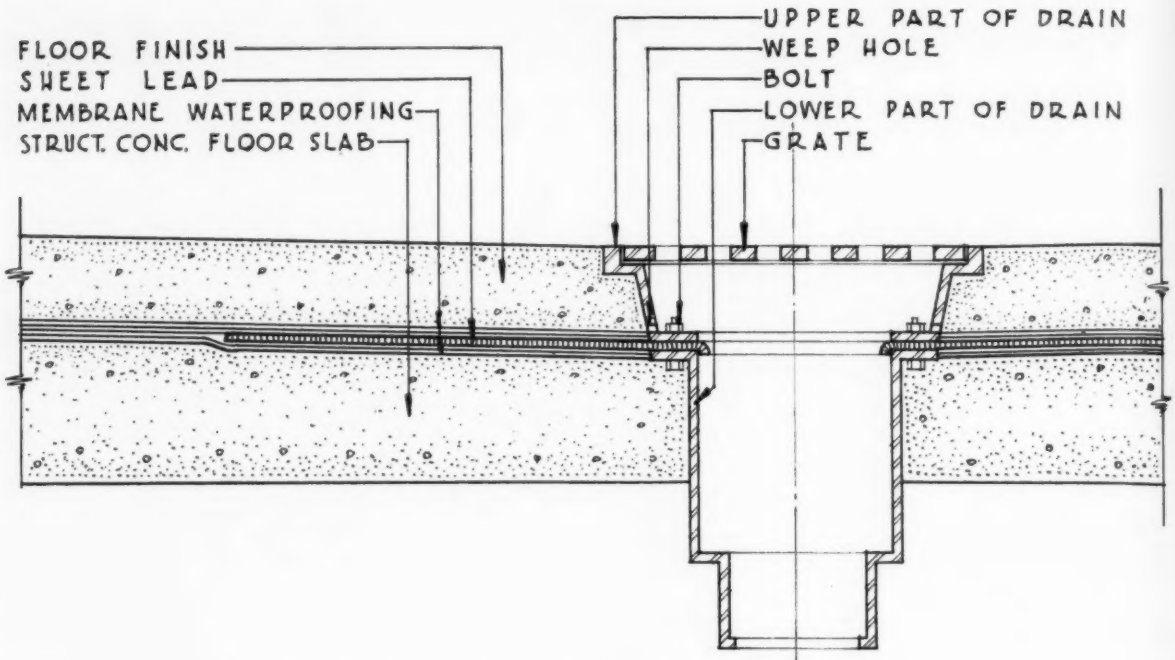
drys skimmilk, whole milk and sweet and sour buttermilk with equal success. Your profits are increased through top product quality, low production costs and large capacity.

Write for Bulletins 343 and 344.

BUFLOVAK EQUIPMENT DIVISION
OF BLAW-KNOX COMPANY

1627 Fillmore Ave. Buffalo 11, N. Y.

295 Madison Ave., New York 17 1636 Monadnock Bldg., Chicago 4 2217 Olive St., St. Louis 3 1706 Broadway, Oakland 12, Calif.



TWO PIECE FLOOR DRAIN DETAIL

perature areas and pitch in other areas), will prevent this in your plant, provided proper attention is given to such details as wall, floor drain and pipe sleeve flashing. Flashing at walls is best accomplished by carrying the membrane up on the wall approximately 10″ to 12″ over a 45° cant. An additional 2 plies over the wall flashing extending out about 6″ beyond the cant on the floor waterproofing is good insurance against leaks caused by building expansion, contraction or settlement.

The top of the structural concrete floor slab on which waterproofing is to be applied should pitch toward the floor drains. The floor drains should be of the two piece type or those with a flashing lip and ring to receive a square of sheet lead. The sheet lead is set between the upper and lower parts of the drains or into the flashing lip, depending on the drain selected, and fastened as provided for by the drains. The membrane waterproofing is carried under and over the lead sheet and as close to the body of the drain as possible. Drains of the type mentioned have weep holes in the body above the lead fastening to allow water reaching the top of the waterproofing and running down the pitched surface to find its way into the drain and drain pipe. Be sure these are not filled with asphalt, pitch or concrete during construction.

Pipes, conduits, etc. passing through a floor are difficult to make watertight without a sleeve large enough to allow the pipe to expand, contract or vibrate and not disturb the sleeve. It is good practice, although not always possible, to locate these at the high points of pitched floors where, generally, there is the least amount of water. They should be provided with a flashing flange 10″ to 12″ larger than the outside dimension of the sleeve so that the membrane can be carried under and over the flange as with the lead sheet at floor drains. Provisions should be made to anchor the sleeves to the structural slab so that they will not be moved after installation and the seal between the flange and membrane broken.

With close supervision during installation a waterproofing job along the lines briefly described above will not require any expense for maintenance for a good number of years. However, it can be ruined during the first alteration if the waterproofing is cut for additional drains, pipes or other openings and not made watertight again. During this work as much attention must be given to those details as during the initial installation.

WORTH LOOKING INTO

A national meeting devoted to study and action on highway and road problems, including those of special interest to such highway users as ice cream manufacturers, will be held in Washington, April 25, 26 and 27 by the National Highway Users Conference.

Harvey P. Hood, of I.A.I.C.-M.'s board, is on N.H.U.C.'s Board of Governors, which will meet during the Congress. Robert C. Hibben, executive secretary of the International Association of Ice Cream Manufacturers, is a member of N.H.U.C.'s Administrative Committee and as such will have an important part in the Congress.

One of the main subjects to be discussed at the Highway Transportation Congress will be how to get better and safer roads and streets immediately at a tax cost which will not be excessive.

Information and registration blanks for the Highway Congress may be obtained from the offices of the National Highway Users Conference, National Press Building, Washington 4, D. C.

XUM

how many make a "Googal"?

A "Googal," as we discovered recently, is a coined mathematical term used to denote the largest known number. It would look something like this . . .

10,000,000,000

INDUSTRY PROBLEMS

Dr. Robert F. Holland and Dr. James C. White, both of the Department of Dairy Industry at Cornell University, conduct their question and answer column each month in the "Review". Questions should be addressed to either Dr. White or Dr. Holland, Department of Dairy Industry, Stocking Hall, Cornell University, Ithaca, N. Y.

●

Milk and Vitamin C

QUESTION—Is the vitamin C content of milk large enough to be of significance in the diet? What is its function?

R. M. F., New York

ANSWER—The vitamin C or, as it is now commonly called, ascorbic acid content of *freshly produced* milk is indeed large enough to be of significance in the diet. The orange has always been recognized as one of our best sources of ascorbic acid, and yet the statement has been made that in the United States cows produce each year a larger amount of this material than is available in our entire orange crop.

However, you will note that I have underscored "freshly produced". It is often a long journey from the dairy farm to the consumer's table and as soon as milk leaves the cow's udder and is exposed to the oxygen of the air chemical changes begin. Ascorbic acid is slowly converted to a material which the chemist calls dehydro-ascorbic acid. This change in itself is not harmful because the dehydro-ascorbic acid also has vitamin activity.

Unfortunately, this is only one of a series of reactions and as soon as the milk is heated in the pasteurizer, and especially if a small amount of copper is present, the dehydro-ascorbic acid is rapidly converted to a substance having no vitamin value. Thus a considerable amount is rendered unavailable for human nutrition.

Further, the above reactions continue during storage in the dealer's cold room and much more rapidly when the bottles of milk are standing on the consumer's doorstep. Exposures of milk to sunlight, direct or indirect, greatly speeds up ascorbic acid degeneration. The result of all these factors is that, in a large majority of cases, by the time the milk is consumed only a very small part of the original vitamin C remains in a form nutritionally useful.

Ascorbic acid has been termed the antiascorbutic vitamin and its presence in proper amounts in the diet prevents the development of the deficiency disease called "scurvy". The manifestations of scurvy are scaly skin dotted with livid spots, soft gums, slow healing of wounds, malformation of bones and teeth, dental caries, bleeding mucous membranes and general degeneration of the wall-strength of the blood vessels. The disease was the scourge of sailors before its nature was understood. British sailors were, and are, called "limeys" because the English found that lime juice in their rations would prevent scurvy and in the days of very long voyages this juice was served regularly as a preventative measure. Nowadays, when fresh fruits and vegetables can be stored and kept on shipboard this practice is not necessary. Nevertheless, scurvy appears in many countries, even the United States, where people consume diets involving salt meats and cereal grains, without fruits and vegetables.

Mold Control

QUESTION—We are interested in eliminating as much as possible the mold spores in our plant, since we consider that they are the main cause of spoilage of our cultured milk product.

Can you recommend us any efficient product to be vaporized or sprayed?

J. M., Long Island

ANSWER—In practice we do not believe it is possible to eliminate all of the mold spores from any dairy plant. Many methods have been proposed and tried and none has shown itself to be completely effective.

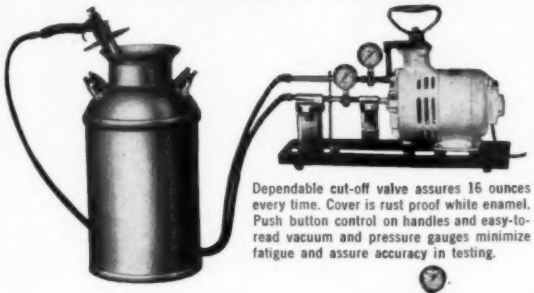
Molds grow on walls, floors, and ceilings. They grow wherever the most minute particles of milk products or other food materials happen to lodge, and a very small growth of mold will produce tremendous quantities of mold spores which are easily spread by small air currents so that contamination is a serious problem. They require air for their growth and thus are not a problem where products are packaged in the absence of oxygen.

The installation of ultra-violet lamps has been effective in controlling

(Please turn to Page 58)

XUM

FULLY AUTOMATIC MODEL D SEDIMENT TESTER



Dependable cut-off valve assures 16 ounces every time. Cover is rust proof white enamel. Push button control on handles and easy-to-read vacuum and pressure gauges minimize fatigue and assure accuracy in testing.

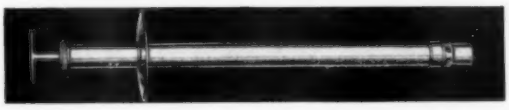
AIR-VAC MILK SEDIMENT TESTER Model E

The light weight combined with push button control and operating accuracy features of the L/W Air-Vac are acclaimed by dairymen from coast to coast. The Model E operates from your own compressor (capacity 30 pounds minimum). Regulator maintains constant pressure for uniform sediment test. Air filter prevents any condensation, rust or foreign matter from contaminating milk or restricting normal, easy operation. 20 feet of dairy hose make wide range of action possible.

50% MORE INTAKE AREA WITH THE NEW "CONTROLLED INTAKE" HEAD

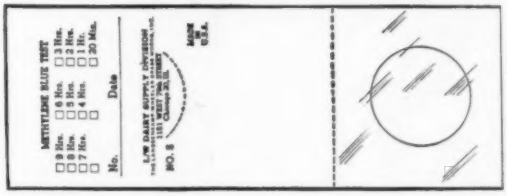
L/W's newly developed "Controlled Intake" Head must make only light contact with the bottom of the can to permit flow of milk or cream into the tester. Larger valve opening (larger than any in the industry today) assures faster intake and discharge through the full diametric opening. Valve will not stick. Head fits any sediment tester, mechanical or manual.

MODEL C MANUAL TESTER

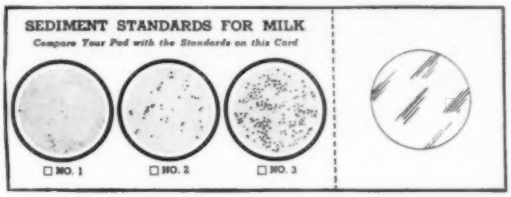


Features simple durable light weight construction. Has drip guard, special and rounded sanitary threads, positive quarterturn head lock and butter-fat-resistant neoprene plunger for trouble-free operation. Choice of brass-chrome plated or stainless. Also equipped with L/W disc retainer.

CARDS



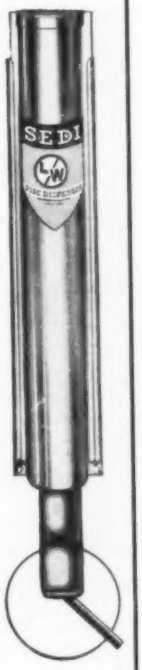
Make sure of the best. Insist on L/W test cards for milk and cream. Eleven separate cards to meet your specific needs. Made of firm paper stock with clear cellophane window. Disc stays locked in card. Comparison charts on reverse side of No. 5 (milk) and No. 6 (cream).



DISCS

Developed for L/W Milk and Cream Sediment Testers. These discs guarantee no shrinkage and retain correct 1¼" size and proper density under high pressure and high temperature solutions. Milk discs come 100 to box. Cream discs 500 to box.

CUT TIME, LABOR and WASTE WITH THIS AMAZING L/W SEDI DISC DISPENSER



Controlled feeding and dispensing assure easy and efficient operation. Simple to load and quick on the draw—it's practically indispensable as a time and labor saver. A slight upward pressure of the finger is all that's required to give a clean, dry disc every time. In addition, the new L/W Sedi Disc Dispenser:

- Saves Waste—holds 200 discs, yet permits only one to be dispensed at a time.
- Saves Time—can be mounted wherever most convenient . . . on wall or post, or on the can by means of special bracket (pictured in circle below).
- Retains Disc's Shape—Constantly exerted pressure in column retains perfect alignment, assuring quick dispensing of discs in proper shape.
- Preserves Discs—keeps them clean and dry.
- Lasts Indefinitely—constructed of sturdy stainless steel.
- Offers Tested Serviceability—tried and proved, the L/W Sedi Disc Dispenser has been thoroughly field-tested for over two years.

Write for Descriptive Literature

L/W DAIRY SUPPLY DIVISION
THE LANGSENKAMP-WHEELER BRASS WORKS, INC.
1266 Shelby Street — Indianapolis 3, Indiana
DESIGNERS AND MANUFACTURERS OF MODERN DAIRY EQUIPMENT

The EYES Have It In Mammoth Sales Promotion

A NATIONWIDE CONTEST for consumers, designed to stimulate the sale of milk, is being launched by The Sealright Company, Incorporated of Fulton, New York. Backed by an extensive advertising campaign at both national and local levels the contest is expected to attract more than a quarter of million entries.

Three contests will be run with a total of thirty valuable prizes offered to the winners plus a grand prize of a 1950 Packard Sedan for the person presenting the best solution to all three contests.

The first contest will be announced in *Colliers*, May 19. The contest will start on that date and close on June 30. The second contest will run from July 29 through August 31 and the third contest will extend from August 26 through September 30. The winner of the grand prize will be announced in *Colliers* October 28.

Money can Buy
Best
You can't identify these fingerprints
...but if you recognize these famous movie eyes
you may win
10 VALUABLE PRIZES TO JUNE CONTEST WINNERS
Sealright SANITARY MILK BOTTLE CLOSURES

A national advertising campaign will carry word of the contest to consumers in all parts of the nation. First ad will appear in Colliers' May 19 issue.

Each of the contests will be built around the problem of identifying a pair of well known eyes. The eyes will be the eyes of prominent motion picture stars. Contestants will be required to name the person whose eyes are pictured in the announcement of the contest and to supply not more than 25 words to complete a sentence on the value of pouring surface protection in a milk bottle. One pair of eyes will figure in each contest. The contest will be designated as an EYEdentification contest.

Billed as something of a mystery game the promotion takes advantage of the present wide interest in identification and puzzle contests. It is estimated by competent authorities that one out of every three people in the United States will sooner or later participate in some form of sales promotion contest such as this EYEdentification contest. This particular contest was conceived as a simple, easy contest in order to insure wide popular participation. Intriguing clues will accompany the picture of the eyes to be identified, which, Sealright officials say, will add to the fun of the contest and carry out the mystery idea.

From the dairy industry point of view the most fascinating part of the contest is the philosophy behind

XUM

Hot or Cold

Every milk customer is a prospect when you use

Johnston richer, tastier chocolate dairy powder

Reason is, young and old alike go for chocolate milk — hot or cold — when it's made with Johnston non-settling Dairy Powder. That's because Johnston Powder is made of full, rich chocolate that never varies in quality. More, it enables the dairyman to produce a richer, far tastier chocolate milk at a cost 20 to 35% below the cost of using prepared dairy syrups.

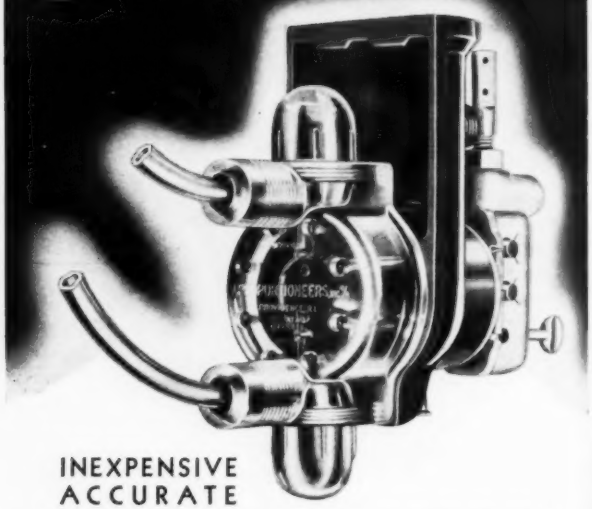
Start cashing in on these big extra sales — extra profits today. Ask your Johnston Distributor for sales tips and proven sales helps. Remember, hot or cold—chocolate milk is a year 'round profit maker!

See your Johnston Representative today!

ROBERT A. JOHNSTON CO.

Milwaukee, Wis. • Hillside, N. J.

FOR EXACT and POSITIVE
BOTTLE
Chlorination



INEXPENSIVE
ACCURATE
CHEMICAL FEEDER
% PROPORTIONEERS %
Chem-O-Shot

The new, improved all plastic Chem-O-Shot. Stroked by the washer itself, it discharges a measured quantity of hypo-chlorite solution direct into the sterile rinse water and assures you of perfect safety and bottles chlorinated to the required number of parts per million.

Safe, easy, and economical--it assures a perfect job for this important task

KLENZADE

Chemical cleaning specialists serving the dairy industry with conveniently located branch offices, warehouses and distributors in principal cities throughout the nation.

KLENZADE PRODUCTS
incorporated
Beloit, Wisconsin

it. The Sealright Company is entering the major national contest field in order to help milk dealers sell more milk in the belief that the more milk that is sold the more the company's products will be in demand. Any consumer in the United States is eligible to enter the contest but dairymen who are using Sealright products are encouraged to use the contest as their own sales promotion. Mats, streamers, posters, radio shorts and other local advertising will be available to customer dairies in addition to the comprehensive national campaign. The milk dealer whose customer wins one of the prizes will have the opportunity of making the award if he so desires.

The contest will be spearheaded by full pages of advertising in *Collier's* and co-ordinated direct mail promo-

Point of sale material promoting contest will be available. Sealright customers will have the opportunity of awarding prizes if one of their customers wins.

tion. Contest entry blank hangers and streamers will be placed by local dairies in most of the wholesale outlets in the United States. Bottle collars on millions of deliveries, as well as newspaper and radio advertising throughout the country will bring the promotion down to the local level.

Judging will be done by R. L. Polk Company of Chicago, a firm of specialists in contest judging.

The contest implements the idea, currently gaining favor among various segments of the industry, that the job of selling milk is a responsibility of producers and suppliers as well as dealers. Producer organizations, such as the American Dairy Association, have spent large sums of money advertising dairy products on a national scale. The Sealright Company's EYEdentification contest brings the supply element into the selling picture. In announcing the contests, J. L. Dolphin, Vice-president in charge of sales at Sealright declared, "We want to bring to the consumer's attention more and more the health-giving, nutritious values of milk".

XUM

THE SUCCESSFUL SALESMAN AVOIDS ARGUMENTS

By Frank W. Gray

IT IS SAD BUT TRUE that selling interviews tend to lead to arguments. This is because there are two interests involved, and they must be brought into agreement before a sale can be made.

Experienced salesmen are aware of the danger of "winning the argument and losing the sale." They know that arguments are apt to antagonize, that you cannot convince and antagonize at the same time.

The trouble is that most buyers are on the defensive. Their replies lead directly to controversies, unless the salesman is on his guard. For instance, if the buyer says, "I have no call for your merchandise," or "Your price is too high," or "I am overstocked now," there is a temptation for the salesman to divert from his presentation and attempt to refute such statements. To do so is to cement sales resistance.

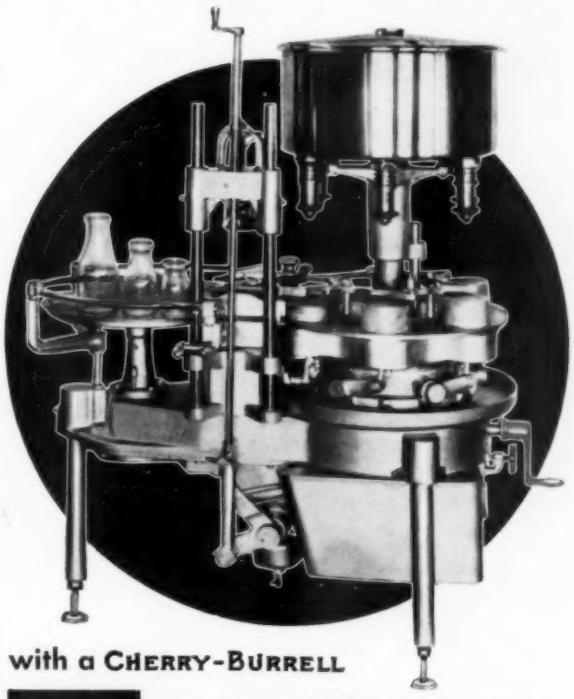
Clever salesmen meet such resistance by passing it up. They stick to their objective of giving a coherent and logical sales story, rather than jumping at objections as a trout does at a fly. This amounts to controlling the interview, and not allowing the buyer to throw you off the track by statements which he probably only half believes himself.

In too many cases the customer sells the salesman, instead of the salesman selling the customer. The real test of personal selling is the ability to by-pass objections, convince the buyer, and reach an agreement. This involves the technique of winninig an argument without arguing.

One of the best ways of doing this is to illustrate selling points through the medium of a friendly third party. Bring up the case of some dealer who is handling your merchandise to good advantage. Select a dealer in the same town, of the same approximate size, in the same line of business. Tell about the experience of this dealer with your products. It is easy to argue with personal opinions, but difficult to dispute the experience of a third party when the story is based on facts.

The important thing is for the salesman to avoid contradictions, and keep the interview on a relaxed and friendly basis. It is dynamite to give the buyer the impression you are trying to make up his mind for him. If the prospect expresses a negative thought, counter it with a positive example. If he argues price, talk value. Never forget to sell *benefits* in the form of consumer satisfaction, turnover, profit. If you do this, and don't make a sale on the first call, you will find the door open on the second time around.

cut your filling losses ... save milk and money!



with a CHERRY-BURRELL

"six" series filler-capper

Overfilling, spilling and leaking valves waste milk down the drain that should be going into the bottles. Don't let this shrinkage affect your profits. Cherry-Burrell "SIX" series filler and cappers for small dairies stop these losses. They give you automatic, uniform, drip-free filling to any pre-set level. In addition, they bring efficiency, versatility and superior sanitation to your filling operation for higher quality—higher profits.

The "SIX" series filler offers you automatic uniform filling at low cost. It is ideal for small or medium size plants ... fills and caps 16 2-quart, 20 quarts or 32 pints a minute. Cherry-Burrell patented Uniform Filling Valves fill every bottle to the same exact level ... never overfill or drip on the cap. The Milwaukee self-adjusting capper handles any standard caps and can be equipped to handle any cover style caps.

"SIX" series fillers have many other "big filler" features. Get complete details from your Cherry-Burrell representative. Ask him for bulletin G-417.

CHERRY-BURRELL CORPORATION

General Sales and Executive Offices:
427 W. Randolph Street, Chicago 6, Illinois
Milk and Food Plant Equipment and Supplies
FACTORIES, WAREHOUSES, BRANCHES, OFFICES OR DISTRIBUTORS AT YOUR SERVICE IN 56 CITIES

trendmaker in a great industry

MEET THE NEEDS OF TODAY

with

KUSEL

EQUIPMENT

Tender Heat

CHEESE VAT

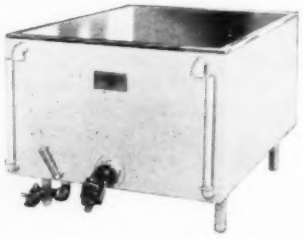
TENDER, UNIFORM, CONTROLLED HEAT for IMPROVED CHEESE of all types

A modern, exceedingly efficient vat for all cheese, but especially soft curd cheeses. Holds precise setting temperature, accurately controls cooking for uniform, soft, sweet curd of finer flavor and aroma. Provides for rapid and flexible heating and cooling. No "off" batches, no uncooked curd, no hot spots, no sticking. Write for Bulletin 7H.

Midget

COTTAGE CHEESE VAT

Especially adaptable to small dairy plants and laboratory use



MAINTAINS A HIGH STANDARD OF QUALITY EVEN IN SMALL-BATCH CHEESEMAKING

Bottom slopes toward large gate valve for fast drainage but is flat and at right angles to accommodate curd knife. Variable height overflow for various levels of milk. No. 4 finish 20-gauge stainless steel inside, aluminum or white enamel outside. Hot water thermometer standard equipment. Ask for Bulletin 7E.

QUALITY PROVED · KUSEL · DAIRY EQUIPMENT

KUSEL DAIRY EQUIPMENT COMPANY

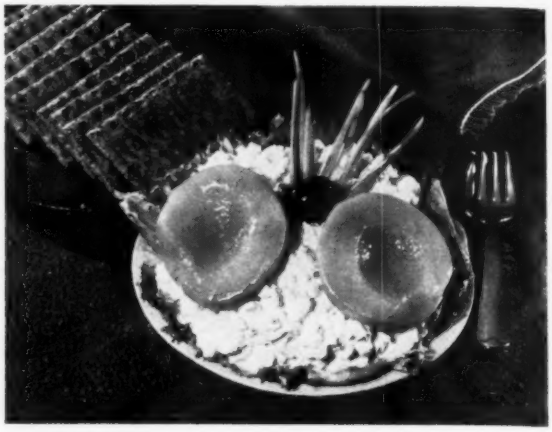
Watertown, Wis.

Cheese Vats of all kinds, Receiving Vats, Regenerative Pasteurizers, Weigh Cans, Holding Tanks, Can Washers, Forker and Agitators, Cheese Presses, Starter Cans, Curd Knives, and other special equipment. Also jobbers of complete line of Cheese Factory supplies.

Peach-Cottage Nuptials

ADA and Cling Peach Advisory Board Team Up On Operation Hollywood Bowl

HOLLYWOOD BOWL, a new cling-peach-and-cottage-cheese salad developed by the Cling Peach Advisory Board and American Dairy Association, is scheduled for frequent appearances on the national dinner table during Lent. Spring-bright with golden-



yellow peaches, tangy cottage cheese, ripe olives, celery sprigs and crisp greens, the salad offers welcome relief from heavy winter diets.

Last year's peach-and-cheese merchandising drive produced outstanding sales records for many grocers. This Spring, a stronger campaign is expected to develop even better results.

Three-way Sponsorship

Unified action by three major advertisers is planned to help grocers develop a profitable turnover in good impulse items. March and April will see Hollywood Bowl salad introduced to housewives through –

1. Full color advertisements by the dairy association on American Express trucks and in *Saturday Evening Post, Ladies Home Journal, Better Homes and Gardens.*
2. Ralston Ry-Krisp color comics in 58 newspapers, coast to coast. Also, the Paramount-produced radio show, "Erskine Johnson in Hollywood", released through 360 Mutual network stations.
3. Full-color advertisements by Cling Peach Advisory Board in *Good Housekeeping, Life, Look, McCall's, Woman's Home Companion, This Week, American Weekly,* and other magazines and newspapers.

All in all, there will be more than 100 million Hollywood Bowl salad ads – most of them in color.

Dairies to Swell Campaign

Supplementing this three-way major effort, most large dairies will help localize the drive. They will print

(Please turn to Page 49)

The Morning's Mail

The Bitter - -

Dear Mr. Myrick:

First "Alumnus"; now me.

I thoroughly enjoyed your interestingly-written January issue article on "Nightmare in Rhode Island."

It was, however, distracting to discover that the editor can't even spell commonplace words!

. . . scrutenized . . . inexhorable . . . (twice on that one) . . . esprit de corp . . . occupys.

Tch tch tch tch!

Particularly yours,

NO A. WEBSTER.

Dear Editor:

First, let me congratulate you on the exclusive feature articles you have been running in your paper. I find them intensely interesting but frankly can't appreciate the little joke you play on your readers – or was it a joke?

I was reading such an article in your Februaary issue, entitled "Brazil–Milk, Mules and Boys" with considerable interest and when I got to the bottom of the page I read "Please turn to Page 73" which I obediently did and found myself forthwith in the classified advertisement department. After vainly searching through the rest of the book for the remainder of the Brazilian article and not finding it I concluded either this was a clever ruse to get your subscribers to read the classified ads or you had "pulled a boner". In either event I don't like it. If I'm interested in the classified ads I'll read 'em anyway. What I want to know is will you run the rest of the story in the March issue or just what do you intend to do about it?

A DISGRUNTLED READER.

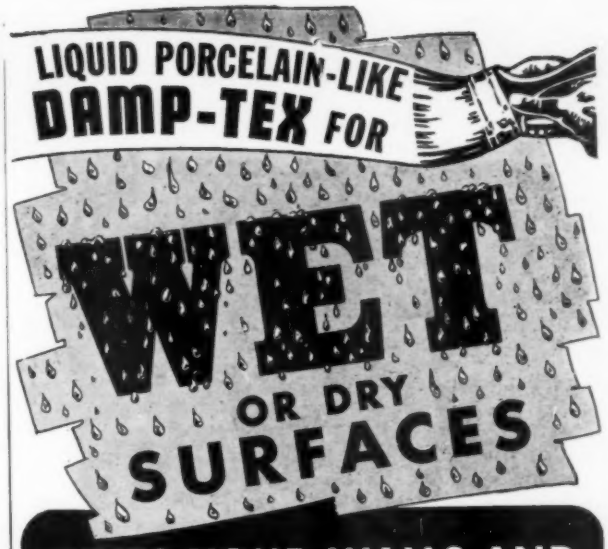
Our face is red, our ears are burning, our knuckles are sore. Only explanation we have is, as the man said when he went to dig his potatoes and found he had forgotten to plant them, "Well, a guy can't think of everything". We've printed the complete Brazil story in this issue. It's on page 50 but it was a boner and it "warn't good."–ED.

- - And The Sweet

Congratulations on Presenting The Ladies in the February issue.

M. E. V., Providence, R. I.

Last evening, having returned from an extensive trip, relaxing in an easy chair, I was thrilled when I opened



GIVES YOUR WALLS AND EQUIPMENT A PORCELAIN-LIKE FINISH OVERNIGHT

Proved Fungus Resistant by FUNGUS TEST

Proved Lactic Acid Resistant by ACID TEST

Damp-Tex Enamel is used in 8,467 plants for wet surface maintenance. It penetrates and forces out moisture. Adheres to damp or dry wood, metal, concrete, plaster. Stops deterioration, rot, rust, bacterial and fungus growth*. Will not crack, peel, check, sag or fade. Comes in non-yellowing white and colors. One coat covers. Dries hard overnight into tough, porcelain-like waterproof film. Will not taint foods.

**Pre-Treated Damp-Tex.*

Send for Details OF OUR NO-RISK TRIAL OFFER

Your first Damp-Tex is used entirely at our risk. Send for folder P for complete details.

DAMP-TEX
THE WET-SURFACE ENAMEL
STEELCOTE MFG. CO. · ST. LOUIS, MO.

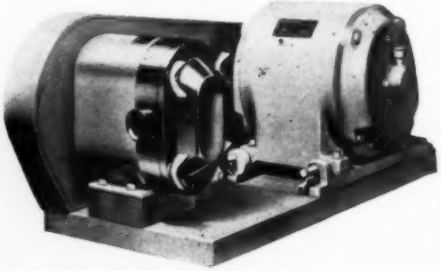
THE CREAMERY PACKAGE MFG. CO.
National Distributor of Damp-Tex Products to the Dairy Industry.
General Offices 1243 W. Washington Blvd., Chicago
Branches in eighteen principal cities

Canadian Manufacturer: Standard Paint & Varnish Co., Windsor, Canada

NO GEARS OR METAL TO METAL CONTACT MEANS...

NO SQUEEZING OF PRODUCT with New P.D.* Waukesha SANITARY PUMPS

In dairy plants squeezing can mean "battering up" fat globules and losing quality control. This is *not* the action of WAUKESHA 100% Sanitary Positive Displacement Pumps, engineered to improve production efficiency and maintain top quality of product. They use gentle slow speed for non-agitating, non-aerating flow. Large open chambers, positive vacuum suction and positive piston action of twin-blade impellers are among the outstanding features that deserve your consideration. And remember, there are no gears or metal-to-metal contact . . . no threads in the product stream. Added up, these advantages . . . plus many others . . . explain why WAUKESHA 100% Sanitary Positive Displacement Pumps meet 3A standards. Write for the complete details.



WAUKESHA FOUNDRY COMPANY
WAUKESHA
WISCONSIN

*P. D.—Positive Displacement . . . Slow Speed

Waukesha 100% SANITARY PUMPS
Dependable Product of a Responsible Manufacturer

my copy of the January issue of the American Milk Review. I immediately stopped everything and went through it from cover to cover. Personally I like the setup very much.

C. A. B., Montgomery, Mich.

Dear Sirs:

This is the first letter of this kind I ever wrote but here it is. Congratulations on the type of dairy journal you are publishing. To my way of thinking (we subscribe to seven) it is a leader in the field. Give us more articles written by your staff and less of the hocus pocus dictated by some dairy executive and censored by the board of directors. We like it.

Your article on the Providence, R. I. situation brought home to us a similar situation here. It was well written.

Don't let our subscription lapse.

L. M. S., Sikeston, Mo.

Dear Editor:

The January American Milk Review is excellent. The "New Look" together with the informative articles mark it to be the best issue of the month in my opinion.

B. F. J. New York, N. Y.

Dear Mr. Myrick:

Heartiest congratulations on your February number and your new streamlined magazine.

C. S., New York, N. Y.

Dear Mr. Myrick:

I have just read your article entitled "Nightmare In Rhode Island" in the January issue of the American Milk Review. This is an informative and impartial report which is very valuable to a person like myself who has wondered what the facts were in the Providence situation. I wish to express my appreciation for the fine job done. It is extremely worthwhile.

L. C. C., Ithaca, N. Y.

Dear Mr. Myrick:

When the magazines reached my desk early this week yours was on top of the pile. I recognized the name but it seemed to be telling a top-notch story in brand new clothes. I was impressed and became more so as I turned the pages.

L. H. G., Chicago, Ill.

You try to do a job. You know you've got a long way to go but you think maybe you're making progress. Then some folks take the trouble to write and it makes you feel good, yes sir, it makes you feel good.—ED.

Who Makes It?

Gentlemen:

In the January issue of the American Milk Review, on pages 62 and 63 you have a very interesting article on a tank cleaner as being among the new items being offered. In reading this article I do not note the name of the manufacturer, the only reference is to the name "Pyrate".

We are wondering as to whether or not you can advise us as to the manufacturer of this unit.

C. G. M., St. Louis, Mo.

Dear Mr. Myrick:

In the January issue of the American Milk Review you had an article on a new cleaning device for milk tanks.

We are very much interested in this piece of equipment and would appreciate very much if you would send us the name of the company making it.

D. R. S., Tampa, Fla.

The tank cleaning device that provoked these letters and many more is manufactured by the Pyrate Corporation, 222-17 Northern Blvd., Bayside, L. I., New York.–ED.

●

PEACHES-COTTAGE NUPTIALS

(Continued from Page 46)

and distribute Hollywood Bowl salad reminders on milk bottle hangers, and on menu tabs for the restaurants. Some will offer sets of four Munising wooden salad bowls, or salad forks and spoons, as special volume-building premiums.

As in previous cling peach merchandising events, a full array of selling helps is being provided. Four-color posters, shelf-talkers, and mats for local advertising are available without charge from representatives of the participating organizations, jobbers, and warehouse distributors.

Cling Popularity Grows

Canned cling peaches, in whatever combination, have extra appeal, both on quality and price, this year. Reports of warehouse movements indicate that they are moving faster than they have since 1946, easily leading all other canned fruits.

"Three years of intensive advertising are also showing a strongly cumulative effect," says S. E. Plumb, manager of advertising and merchandising for the Board. "Our marketing surveys show that housewives are increasingly receptive to recipe suggestions. Since the Hollywood Bowl salad event is the most powerful of its type we have launched, we are convinced tie-ins by grocers will show some new sales records."

Proven Performance

SIMPLEX
BUTTER-PAT MACHINE

DELIVERS PERFECT PATS

Increases your sales . . . Helps sell your complete line—therefore greater profits. Low initial and operating costs means inexpensive pats. Make your pats only when you need them. Control your own inventory. Keep your stocks fresh.

Check these Important Features

A complete unit in itself. Uses Standard Elgin Prints or pre-cut bulk from Simpson, Friday or other cutters.

A capable operator can produce 25,000 or more Butter-Pats per hour.

Easily installed, takes up only one square foot of table space. Makes 9 different sizes at no extra cost.

Sturdily constructed of stainless steel and other rust-proof materials. Easy to clean, simple to service.

Special plates for individual customers.

SIMPLEX BUTTER MACHINES
INCORPORATED
173 FRANKLIN STREET NEW YORK 13, N. Y.

Hey Mac, where d'ya want this can to go? Boys in a variety of sizes are integral parts of the distribution system.

It's All Here and on One Page

BRAZIL — Milk, Mules and Boys

THE POPULATION OF BRAZIL is roughly equivalent to the total number of people living in New York and California. Yet her huge land area places her as the second largest nation in the world. Superimposed on the United States, Brazil would reach east and west from New York to San Francisco, north and south from the Gulf of Mexico to the Arctic Circle.

Brazil is mostly lowland jungle. In the eastern areas are the highlands famous the world over as a source of coffee, sugar, and tobacco. In this highland area the country's dairy industry has reached its highest stage of development. It is on the east coast close to this highland section that the fabulous cities of Rio De Janeiro and Sao Paulo have grown into show places of the world. But perhaps the most marvelous of all the superb marvels of that mighty land is the sleek, fat Amazon coursing indolently from the slopes of the Andes across four thousand miles of jungle. At the exact point where the equator intersects the eastern coast of South America, the Amazon dumps its silted waters into the Atlantic Ocean.

The influence of old Portugal lies heavily over Brazil. More than four centuries past the empires of Portugal and Spain were engaged in bitter rivalry for possession of the new world. Both had substantial claims based on right of discovery and conquest. To settle the matter that threatened war both sides agreed to arbitration. The settlement, proposed by the Pope who was the arbitrator, provided for an imaginary line to be drawn 375 leagues of the Cape Verde Islands. Lands west of this line belonged to Spain. Lands east of the line were to be under the jurisdiction of the Portuguese crown. Spain got the gold of Mexico and Peru. Portugal got one of the greatest agricultural regions in the world.

Brazil is a land of extreme contrasts. Her principal cities, Rio De Janeiro and Sao Paulo, are as modern and beautiful as any in the world while her interior regions are backward to the point of being primitive. The distribution of milk is one example of this contrast in ways of life. While the big cities have up-to-date efficient dairy plants and distribution systems the people of the interior states must still drink milk that is unpasteurized and un-treated in any way.

The state of Minas Geraes where these photos were taken contains many dairy farms. While much of the milk production from that state goes to the large city dairies a great deal of it is still sold in raw form to people in small towns and villages. Farmers use mules to carry their milk to railroad centers. Each mule carries two or more wooden crates each of which in turn holds two metal containers full of milk. At the back of each crate is a spigot which drains the milk off into larger metal cans or small bottles.

Some of the milk is sold right at the railroad station where the customer brings his own bottle, usually an empty quart beer bottle. The milk is drawn from the container on the back of the mule directly into the bottle. The milk that is not sold at the railroad station is emptied into larger metal containers and carried by train to other small centers. As each small town is reached along the railroad line the milk cans are dropped off and emptied into the bottles of other customers.

A farmer loads his mule-back transport preparatory to a trip to the railroad station. Whether he will have milk or butter when he gets there is an open question.

XUM

Dairy Employees Go To School

California Dairy Advisory Board Sponsors Unique Training Program in Cooperation with Public Schools

LOS ANGELES, January 17 — Free evening adult education classes in Fundamentals of Processing and Distributing Dairy Products are offered in the Los Angeles and San Francisco public schools. The courses are designed for men and women in the dairy industry.

The courses are made available under a plan worked out in Los Angeles by a committee composed of representatives of the dairy industry, education and labor of which Mark Matthews, Carnation Co., is chairman. The courses are sponsored jointly by the boards of education and the California Dairy Industry Advisory Board. The lecture outlines will be the same in both cities.

The series includes twelve lectures at weekly intervals and the opening date in San Francisco was January 17; in Los Angeles, February 6. There will be one class only in San Francisco, Horace Mann High School. In Los Angeles, classes will be held at South Gate High School, Fremont High School, Dorsey High School, North Hollywood High School and Lincoln High School.

All persons employed in the dairy industry in Los Angeles and San Francisco are eligible for the classes. The purpose is to broaden the knowledge of the dairy industry among those who work in it, according to Richard J. Werner, manager of the Advisory Board. This is intended to be a complete introductory course and serve as preparation for specialized courses planned for the future. The lecturers are men from the ranks of the dairy industry. Each is well qualified in his subject from long practical experience.

The Los Angeles working committee which prepared the State-wide program is: Mark Matthews, Carnation Co., chairman; Richard J. Werner and Gus Rothe, California Dairy Industry Advisory Board; James Bahan, Royal Farms; Dr. Howard A. Campion, assistant superintendent of schools; E. Manfred Evans, supervisor of adult education; C. B. Baldwin, coordinator, division of extension; Tenney Cannon, Creameries of America; Paul Jones, A. F. of L. Teamsters; Harold Wakefield, Adohr Milk Farms; Leonard Tracy, Teamsters Local 441; G. H. Brockmeyer, Arden Farms Co.; Mark Whiting, A. F. of L. Teamsters Local 93.

Coordinators are: James Carothers, Balian Ice Cream Co.; Henry Morse, California Milk News; Clarence Fryk, Adohr Milk Farms; James Cortner, Arden Farms Co., Fels Matheny, Carnation Co.; W. H. Reuter, Golden State Co., Ltd. and William Buss, Arden Farms Co.

The San Francisco general committee is: *Board of Education,* Groville D. Adams, R. Earl Thompson and Joseph Oricello. *Industry,* J. F. Jensen, Golden State Co., Ltd. Max G. Sperling, Bell-Brook Dairies Inc.; Richard J. Werner and Irene Gill, Dairy Industry Advisory Board; J. A. Conaghan and Larry Maes, San Francisco Milk

(Please turn to Page 74)

STOELTING

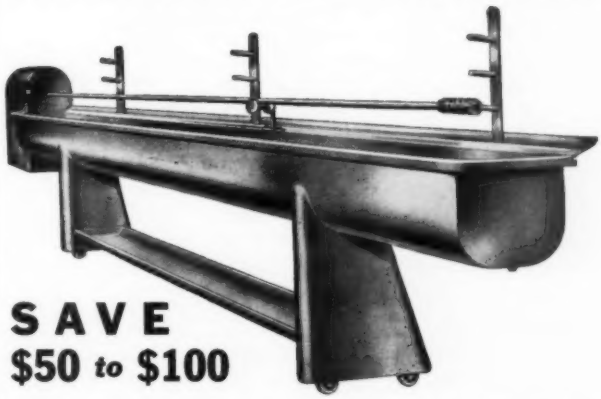
ADVANCED EQUIPMENT

★ Modern Design
★ Finest Stainless Steel Craftsmanship
★ Plant Layout and Engineering

Compare! AND CHECK THE EXTRAS YOU GET IN A

STOELTING

SANITARY PIPE WASHER



SAVE $50 to $100

Get *all* the extras in a Stoelting Sanitary Pipe Washer *without* extra charge. Check these *included* features before you buy: *Complete* power assembly; covered hood for motor, pump and power assembly; set of four easy-rolling casters for quick portability; sturdy pipe rack; full back apron; broad lower shelf; 1½" sanitary pipe brush — everything you need for fast, thorough, economical pipe washing — backed by Stoelting time-honored craftsmanship for extra years of service. Save time . . . save money . . . get *all* the *extras* in Stoelting . . . by far today's best buy in pipe washers. Only $259.60 (F.O.B. Kiel, Wis.) for a ten foot model; other sizes priced accordingly. Make your dollars *do more* and *go farther* with a Stoelting Washer.

For Extra Values and Extra Features Write

STOELTING BROTHERS CO.

Manufacturing Engineers for the Dairy Industries

KIEL • WISCONSIN

TAX STATUS OF CO-OPS

(Continued from Page 6)

has now ordered the case to trial. Why not? Is a tax-dodging cooperative monopoly any less of an offense to the national economy than any other kind of monopoly? Of course not.

In attempted defense of their tax exemption, the cooperatives parade a full line of red herrings, some of which are worth examining so that your readers will not be taken in:

They say, for example, that they operate as the agents of their members and that they have no income of their own on which to pay income tax.

It is true that first exemption, in 1916, was granted to co-ops that acted as agents in the marketing of farm products. But as the system grew, the co-ops themselves saw that they could not maintain the agency relationship. It was struck out of the law in 1926, and of course, never has been restored.

Today, most cooperatives take title to the goods they handle; assume the business risks; speculate for profits in their own right, and commingle all their transactions in arriving at their annual accounting of profits. They simply do not function as agents.

They say that they are really partnerships, not corporations, and that income tax is paid by the partners individually. And they add that double taxation of their corporate earnings would be entirely wrong.

Actually, ninety percent of all cooperatives have organized and operate as corporations – because the corporate form gives members protection from financial liability. They are not partnerships; maintain none of the aspects of partnership operation – and want to be considered as partnerships only at the point of taxation. As for double taxation being wrong, all businessmen will agree with that point of view, but inasmuch as double taxation of corporate earnings is now the law of the land – and is likely to continue for many years to come – there is no reason why ANY kind of corporation and its stockholders should escape.

They say that their patronage dividends are simply price adjustments in the form of refunds of overcharges or additions to prices.

Really a patronage dividend is a distribution of net profits from the cooperative business operations. A price adjustment through an ordinary refund or rebate, on the other hand, is based upon a predetermined contract to which the individual patron is a party and the payment of the rebate is not dependent upon whether the business earns a profit or sustains a loss. A refund or rebate is not a distribution of corporate profits.

They say that the campaign for tax equality is really a cover-up for an effort to put the cooperatives out of business.

That is sheer nonsense. No one is trying to destroy the cooperative movement. To most taxpayers, it is a matter of supreme indifference whether there are co-ops or not, whether they succeed or fail, what kinds of business they go into, how much volume they do and how much money they make.

Absolutely the only issue is that co-ops be required to pay income tax on their total earnings, just like their competitors, and that other special privileges – like the monopoly permission of the Capper-Volstead Act, and the release from SEC approval in issuing securities, etc.– be abolished. That's all.

They say that paying taxes would destroy them.

That too is nonsense. Other businesses pay full income tax on their net earnings and they not only survive but also have money left to pay dividends to stockholders. Any cooperative can do the same. In fact, some of them are now beginning to come close to doing it, in their efforts to win back some of the public approval they have lost as tax-dodgers. The mammoth Cooperative Grange-League Federation Exchange, of Ithaca, N. Y., is paying $928,000 income tax this year on earnings of about $3,400,000 – about 27 per cent; could easily pay the full 38 per cent and still have nearly $1,000,000 left for patronage dividends and surplus for $600,000.

Doing business without paying taxes is getting to be a national racket. Co-ops are only one of half a dozen business methods for which exemption has been written in the lawbooks. In the aggregate, these tax exempts are getting away with more than One Billion Dollars of tax revenue that the Treasury ought to be collecting!

Educational institutions, originally given exemption on their land and buildings, now own factories, race tracks, airports, radio stations and other properties, which they operate in direct competition with private enterprise, but without paying income tax on earnings.

Colleges and schools are costing the Government added hundreds of millions annually by buying property under what is known as the sale and lease-back gimmick. It is said that one of the biggest mail-order houses has sold all of its real estate in this way.

Foundations and charitable trusts own untold billions of dollars' worth of commercial business – and pay no income tax on earnings. Congress is looking into the manipulations of Textron, the New England textile empire which finances much of its operation by so-called charitable trusts which it has set up. Just recently, a foundation bought for $2,000,000 the 63,000-acre wheat ranch operated by Tom Campbell in Montana. Henceforth, it will pay no tax.

Labor unions have long rented space in their office buildings in competition with other rental properties, and have paid no income tax on earnings. Now CIO's UAW is setting up chains of co-op grocery stores in Michigan. No tax will be paid on the co-op stores' earnings.

Government itself is in competitive business up to the hilt. TVA operates on Government funds and pays no interest; neither does it pay income tax on earnings from the sale of electric energy to such companies as the Aluminum Company of America and from the sale of fertilizer ingredients to cooperatives. Government also operates a barge line on the Mississippi, steamship lines, a railroad, hotels and tourist camps, a rum distillery in the Virgin Islands, etc. No income tax is paid by any of these enterprises. Why not?

Newest among the tax-dodging rackets is our island territory of Puerto

XUM

Rico. Some 50-odd concerns have already moved from the mainland to the island, in order to escape property tax under a 12-year local holiday, and also to escape Federal income tax. Most of the tax dodgers are factories, but a notable one is Ed Gardner's radio comedy Duffy's Tavern which now broadcasts over Government facilities — and pays no income tax on profits!

Tax revision is definitely in the Congressional program for early 1950. It cannot be avoided any longer. Wartime excise taxes must be reduced to give business a chance to sell more of its goods and services. Competitive inequalities must be wiped out to give the taxpayer a chance to survive. And there is no better way of making up the Treasury's loss of excise revenue than by taxing the business income of the tax exempts.

Two bills to accomplish this end were introduced during the first session of the 81st Congress. In the House of Representatives, Congressman Noah M. Mason of Illinois offered HR 5064, proposing to impose income tax on the business earnings of all the tax exempts. That bill, which has attracted wide attention and approval both in and out of Congress, will be up for action when the Ways and Means Committee begins work on a complete revision of our tax statutes next January.

In the Senate, action is pending in the same way on an amendment to another bill—HR 3905—which would tax the retained earnings of cooperatives, permitting continued exemption only to those true co-ops that do business 100 per cent with members and pay out all their earnings in cash each year.

By the end of this fiscal year we shall be $5.5 billion in the red on current Government operations. President Truman is asking for increased taxes to make up some of this deficit. Congress objects to raising taxes in an election year. But there is more than One Billion Dollars of new revenue to come from taxing the un-taxed — and that is what ought to be done first!

There is no longer any logical reason for letting the co-ops go tax-exempt.

TAX THE UNTAXED FIRST!

TAX STATUS OF CO-OPS

(Continued from Page 8)

far as the farmer is concerned. Neither an individual business nor a partnership is thus subject to double taxation. There is no reason why a cooperative member should be so penalized.

There is no reason, for that matter, why a corporate business could not avoid this double taxation. If a corporation chose to return as patronage dividends to its customers the difference between its gross income and its costs, it likewise would have no income of its own upon which to pay income tax. But unlike a cooperative, a corporation is interested in making profits for itself; i.e., for its investing stockholders.

Cottage Cheese Campaign

Norman's Kill Dairy in Albany, New York, gave a shot in the arm to its cottage cheese sales by putting out a special cottage cheese flavored with chives. According to Sales Manager Arthur Folland the "special" worked out well. Norman's Kill has forty retail routes. Route salesmen disposed of the chive flavored cheese at better than eighty pounds to a route over a two day period. The dairy sold more than three thousand pounds of cheese in forty-eight hours.

It should go without saying, however, that what may be a taxation injustice to corporations does not justify an injustice to cooperatives. The solution is to remedy the situation for corporations rather than to create an unfair situation for cooperatives.

Capital Contributions Are Not Income

In considering possible changes in internal revenue laws as they apply to cooperatives, it has been suggested that the "retains" which cooperatives sometimes withhold from their payments to members should be subject to income tax. Such retains, of course, are used by the cooperative as capital. As a capital contribution it is not subject to income tax — no more than is the capital which a corporation accumulates through the sale of its stock. Such money is not considered as "income", to a corporation or a cooperative from a taxation standpoint. It is neither an earning nor a profit. Cooperative retains, are, however, considered as income to the individual members of the cooperatives and income taxes are paid by the individuals on such amounts. It would be manifestly unjust to tax the retains a second time to the cooperative.

The so-called privileges which are sometimes attributed to a cooperative are largely non-existent. The Capper-Volstead Act, for example, does little more than extend to cooperatives the same right to organize and operate that proprietary corporations enjoy. The tax exempt provisions of the International Revenue Code merely spell out the procedure which prevents double-taxation of farmer cooperative members.

Cooperatives are not exempt from the provisions of the anti-trust laws. Neither are they exempt from the payment of the general run of taxes that are applicable to ordinary corporations. Their exemption from income taxes—where they are exempt—arises primarily from the fact that they have no profit-income of their own upon which the taxes are applicable.

Co-ops As Yard-Sticks

Because cooperatives operate on a cost basis and without profit, they have become pace-setters in eliminating unwarranted costs and charges in the handling and marketing of agricultural commodities. They have led the way in the orderly marketing of farm products. They are the yardsticks of efficient business operations. They are a challenge to competitors, but efficient competitors continue to exist side-by-side with the cooperatives.

The hue and cry that has been raised against the co-ops in some quarters is something beyond the protest of ordinary competitors. It is the wolf-cry of a group which would like to wipe the cooperatives off the map so that the agricultural field would again be open to exploitation. As long as the right of farmers to market their products at cost through their own cooperatives remains free and unhampered, other marketing agencies must keep their charges and commissions within reasonable bounds.

XUM

WHY SOME DAIRY PLANTS FAIL TO DELIVER QUALITY CREAM TO MARKET

There Is Much Still To Be Learned About the Keeping Quality of Sweet Cream, but, More Important Is the Lack of Attention Paid to the Quality of the Cream

By THEODORE MARCUS
Director, Massachusetts Dairy Laboratories

THERE ARE TWO REASONS why there is considerable trouble with sweet cream. First, not enough is known about the keeping quality of sweet cream and the bacteriology involved. Second, there is not enough attention paid to the quality of sweet cream.

The keeping quality of sweet cream has always been a real problem. First, because Mrs. Jones uses for Saturday morning's breakfast the last of a pint of coffee cream she bought on Monday. It has been in and out of the refrigerator a dozen times since. It was a week or two old when she bought it. Second, Metropolitan Boston must buy its cream thousands of miles away.

The first test used on cream was titratable acidity. The results are highly variable at best. My laboratory does not have an acidity tester in use today. Twelve years ago Parker Ryan, of the United Farmers, used the increase of acidity upon incubation as a measure of cream quality. There is, of course, the plate count, but the results are not available for 48 hours. Quite often cream with a low plate count, does not have keeping quality.

In 1939 Herbert Jenkins, then with the New England Dairies, adapted the resazurin test to measure the keeping quality of cream. Cream that stood up for 6 hours on resazurin, showed a low plate count and had good keeping quality This test has proved itself through the years, and I am still using it today as the quickest measure of cream quality when a car is sitting on the siding and a quick answer must be given.

Dr. A. C. Fay of H. P. Hood & Sons, has written of the part psychrophilic bacteria play in cream troubles. He pointed out that these bacteria are of water origin, contaminating cream after pasteurization and growing at low temperatures. He used standard plate counts after keeping the cream samples 7 days at 38°F.

There is, of course, the Breed smear. I always use one in inspecting a car of cream. The results are not good. Some cream will show a large number of evenly-stained bacteria, and still have a low plate count and good keeping quality. I do not know why. It must be used with reserve.

The first question in connection with the keeping quality of cream is, how good can it be? Suppose cream from a very good raw milk is pasteurized in sterile equipment, cooled aseptically, and then stored just above freezing. How long will it keep? I have set 160°F. for 33 minutes as the pasteurizing period. One hundred sixty-five degrees F. gives a pronounced cooked flavor which, while not objectionable, should be avoided. I tried fresh cream from the best raw milk. I tried old, repasteurized cream. I checked plate counts before and after a 30-day storage period. I would like very much to say that low count raw milk makes better keeping quality cream as measured by plate count. It does not. I have seen cream from surplus Grade A raw milk which did not have good keeping quality. Apparently no matter what you start with within reasonable limits, 160°F. for 33 minutes gives cream with a plate count of about 200 and E. Coli O. This cream will keep for 30 days at under 38°F. and still show a low plate count, E. Coli O, and a good flavor.

I extended the work to taking samples from pasteurizing vats after the holding period with a sterile pipette,

Presented at the Third Annual Meeting of the Dairy Products Improvement Institute

"Joe Was Sick"

into a sterile vial and then storing at 38°F. after cooling. The results were the same as in the laboratory.

Now to approach laboratory conditions under plant conditions—plant equipment cannot be sterilized as laboratory equipmnt can. Taking line samples looking for points of contamination after pasteurization, showed very little. But keeping the same samples, as Dr. Fay suggested, for 7 days at 38°F., showed where the cream was being contaminated in the plant. However, keeping cream 7 days was not very practical, even for an experimental procedure. I soon found that 1 hour incubation at 90°F. is the equivalent of 1 day at 38°F.

I also found that an **E. Coli** count using Desoxycholate agar, was an excellent measure of cream contamination. I incubated cream samples for 7 hours at 90°F., then plated 1-1000 on tryptone glucose extract agar, incubating these plates at 90°F., and 1 cc direct on Desoxycholate agar. I read these plates in 24 hours and had a good measure of the quality of the cream.

There has been some work done on butter showing that of 30 psychrophilic bacteria isolated from butter, some survived pasteurization at 150°F. I found that of 36 samples of milk pasteurized in the laboratory at 144°F., 30 showed no increased plate count after keeping 30 days at 38°F. Six showed counts in the millions. Much remains to be found out about the bacteria that survive pasteurization and their growth rates under varying conditions.

However, if cream is good in the vat, and poor thereafter, one of two things must happen:

1. The time and temperature of storage after pasteurization are such that surviving bacteria start growing; and/or
2. The bacteria added after the cream leaves the pasteurizer continue growing.

Let us explore the first of these reasons why good cream in the vat goes bad thereafter. Undoubtedly, there are surviving bacteria in cream even after 33 minutes at 160°F.—spore-forming rods, heat-resistant cocci, etc. But there is no doubt that their vegetative set-up has been severely disrupted by the time and temperature of the holding period. Before these bacteria can make any appreciable growth, they must go through their various growth phases. This, of course, would vary with the type of bacteria and the temperature. Under unfavorable temperature conditions it could take weeks, even months. I think that if cream can be cooled quickly enough and kept cold enough, this lag phase can be maintained for 30 days. Thirty-four degrees F. would be a good storage temperature; 40°F. would shorten the lag phase; 45°F. even more so. The temperature of the cream after it leaves the vat is of utmost importance, the lower, the better. Cooler chest temperatures with blowers to take out the heat of fat crystallization, and the heat absorbed in jugging the cream, would help. Even more important is the temperature of cream after bottling. The temperature must be kept low if surviving bacteria are to be kept in their lag phase.

(Please turn to Page 57)

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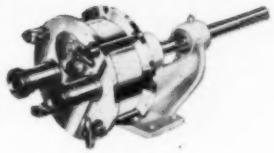

Fig. 171 "Sanitor"
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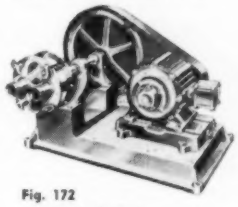

Fig. 172
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Have You Tried

MAKING SHERBETS WITH WHEY?

Sherbets Made with Whey Have Certain Advantages — By Using a Good Raw Material and Intelligent Processing Methods a Tasty Product Results

By **F. E. POTTER and D. H. WILLIAMS**
U. S. Department of Agriculture

EXPERIMENTAL WORK in the Bureau of Dairy Industry has shown that good sherbets can be made commercially with whey solids instead of with the milk solids normally used. Sherbets made with whey often have a smoother body and texture than sherbets made with milk or ice-cream mix, especially if acid fruit flavors are used. There will be no whey flavor in the finished sherbet if good-quality whey is used.

Whey improves the whipping properties of sherbets but causes an excessive overrun if the sherbets are frozen in a batch freezer, unless the mix contains some fat. Excessive overrun can be avoided by adding enough cream so that the mix will contain 1 percent of fat. For a sherbet containing 1 percent of fat, use 2.5 pounds of 40-percent cream or 5 pounds of 20-percent cream in place of an equal amount of fluid whey or water, in each 100 pounds of mix.

Mixes containing pectin need no aging; mixes containing gelatin should be aged 4 hours. If other stabilizers are used, the directions of the manufacturer should be followed.

Flavor and citric acid should be added in the amounts normal for milk or ice-cream-mix sherbets unless fluid whey from cottage cheese is used, in which case less acid will be needed. Generally, 6 ounces of 50-percent citric acid soultion for 100 pounds of mix is needed when sweet whey is used.

The mixes should be pasteurized (at 150° F. for 30 minutes), and cooled. They should be frozen in the same manner as other sherbets.

It is important to remember that good sherbet cannot be made from poor whey.

The formulas on the back of this page will make 100 pounds of sherbet base, using fresh fluid, condensed, sweetened condensed, or dried whey.

FORMULA 1 — SHERBET BASE USING FRESH FLUID WHEY

Ingredient	Weight (pounds)
Cane sugar	21.0
Corn sugar	7.0
Fresh fluid whey	71.5
Stabilizer (pectin or gelatin)	.5

Directions for Mixing

Blend the sugars and stabilizer, and add to the fresh fluid whey. Pasteurize, and cool.

This formula is based on a fluid whey that contains approximately 6.4 percent of total solids.

FORMULA 2—SHERBET BASE USING PLAIN CONDENSED WHEY

Ingredient	Weight (pounds)
Water	63.17
Cane sugar	21.00
Corn sugar	7.00
Plain condensed whey	8.33
Stabilizer (pectin or gelatin)	.50

Directions for Mixing

Combine the water and whey. Blend the sugars and stabilizer and add to the water-whey mixture before it reaches pasteurizing temperature. Pasteurize, and cool.

This formula is based on a plain condensed whey that contains approximately 60 percent of total solids.

FORMULA 3 — SHERBET BASE USING SWEETENED CONDENSED WHEY

Ingredient	Weight (pounds)
Water	63.35
Cane sugar	16.00
Corn sugar	7.00
Sweetened condensed whey	13.15
Stabilizer (pectin or gelatin)	.50

Directions for Mixing

Combine the water and whey. Blend the sugars and stabilizer and add to the water-whey mixture before it reaches pasteurizing temperature. Pasteurize, and cool.

This formula is based on a sweetened condensed whey that contains approximately 76 percent of total solids — i.e., 38 percent of cane sugar and 38 percent of whey solids.

FORMULA 4 — SHERBET BASE USING DRIED WHEY

Ingredient	Weight (pounds)
Water (room temperature)	66.25
Cane sugar	21.00
Corn sugar	7.00
Dried whey	5.25
Stabilizer (pectin or gelatin)	.50

Directions for Mixing

Blend the sugars, dried whey, and stabilizer. Add this mixture to the water slowly, while agitating or stirring the mixture. Pasteurize, and cool.

This formula is based on a dried whey that contains approximately 95 percent of total solids.

"This memorandum of yours-
'I owe petty cash $246,789.00'---"

QUALITY CREAM

(Continued from Page 55)

As to the second reason why good cream in the vat goes bad thereafter, I cannot but repeat Dr. Jensen's statement in his "Microbiology of Meat," "When you contaminate at the logarithmic phase, your growth from then on is logarithmic." If the plant equipment were as sterile as my laboratory equipment, the cream would keep if the first condition of temperature is observed. But, if active, growing bacteria from a jug or from equipment were added after pasteurization, all the refrigeration this side of freezing will not stop growth at a logarithmic rate. Lower temperatures may slow them down but not stop them. I am inclined to view this as a problem in psychrophilic growth as psychrophilic bacteria. Apparently many bacteria are capable of psychrophilic growth.

Following these principles of bacteriology, I have set up certain general rules which must be followed in making cream that will have a low-count and good-keeping quality:

1. Pasteurize cream at 160°F. for 33 minutes.
2. Cool to below 40°F. and place in a blower chest to cool below 34°F. for storage at that temperature. Bottled cream should be iced after bottling.
3. All equipment must be sterilized immediately before using with 180-190°F. water. The simpler the equipment, the better.
4. The cream jugs, besides being clean, must be steamed not more than an hour before filling.
5. There is no substitute for heat in sterilizing equipment or jugs.
6. Good cream after 7 hours incubation at 90°F. will show a low plate count and E. Coli O.

That, gentlemen, is what I have learned of the keeping quality of cream and the bacteriology involved. It has done wonders in the plants that have faithfully followed it. It has not solved all the problems, especially that of human nature. This material was given to a large cream shipper over a year ago. That plant has still not figured out how to steam jugs. Perhaps it is too much trouble. Its cream still bothers and it has to be threatened with a shut-off to bring it in line. Another thing is that cream quality is at the mercy of the first good salesman that comes along. "That is all wrong. Our X compound eliminates all that work." The research data go out the window, and X compound comes in. I was in one large plant that shifted to quartenary ammonium sterilization without adequate data, and ended up with a poor quality cream. I was at two plants that could not get their butter fat testing done in time to standardize before the holding period started, and so were standardizing with water. They did not know about the bacteriology of water. One of these plants had cream in its chest the day after pasteurization at 47°F.

I think that just as important as the technical problem involved, is the human problem of driving for an ever-improving quality. It is cheaper to make a quality cream. Personally I think the technical problems are easier.

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NEW DAIRY COUNCIL UNITS

About 1600 milk producers in cooperation with the milk dealers of Albany, Schenectady and Troy, N. Y., have organized the Dairy Council of the Capital District. Further south along the Hudson River another 800 producers cooperating with milk dealers in Dutchess and Ulster counties have organized the Dairy Council of the Mid-Hudson area. Both have voted to affiliate with the National Dairy Council and both are beginning immediately to pay 1c per hundredweight on all milk sold so they can start their milk sales-building program immediately.

Charles Goodfellow, a producer of Voorheesville, N. Y., is President of the Dairy Council of the Capital District which will be governed by a board of nine producers and nine dealers. Harry Lockwood of General Ice Cream Corp., in Schenectady is Vice-Pres. Arthur Sliter of Sliter's Dairy in Troy is Secretary and George Bergman of the Albany Milk Dealers is Treasurer.

In the Mid-Hudson area Charles Allen of the Kingston Producers Association is President, Varick Stringham of the Farmers Cooperative in Poughkeepsie is Vice-Pres., C. R. Baright of Poughkeepsie is Secretary and Alson Fitchett of Poughkeepsie is Treasurer.

These become the second and third Dairy Council units organized in New York State under the sponsorship of Milk for Health Inc. Through Milk for Health producers will support both the advertising program of the American Dairy Association and the local Dairy Council units. All of the Milk dealer funds will accrue to the respective Dairy Council units. These are also the 55th and 56th Dairy Council units in the United States. The first Dairy Council unit in New York was organized under the Milk for Health plan in Syracuse in July and has been operating since September. Both producers and dealers are enthusiastic over its accomplishments.

For years Hudson Valley producers and dealers have seen more stable markets and more rapidly climbing sales in Connecticut where a Dairy Council has been operating than in New York where milk promotion has been neglected. By working through health departments, women's Clubs, parent teacher associations, medical groups, dental organizations, schools and all other organizations interested in health with approved movies, posters, exhibits and educational materials, the Connecticut milk industry has done an outstanding job of building sales. Through the same sales building plan of the Dairy Council, backed up by the American Dairy Association advertising, these New York groups are setting out to accomplish the same results.

●

INDUSTRY PROBLEMS

(Continued from Page 40)

mold growth in some cases but it is common knowledge that ultra-violet rays do not penetrate heavy films of organic materials and the rays travel in straight lines so that mold growth in unexposed areas is not even partially inhibited.

Special paints have been used to inhibit growth on surfaces. These show some promise but we have never seen a material which was completely effective under all the conditions that may exist in food plants.

MOST of the thousands of satisfied *Seal-Leak* users everywhere re-order through their Jobbers. It's the easy way. The Jobber lives handy-by. He knows you — probably sold you your equipment. Your regular supply orders to him do the trick. The *Seal-Leaks* come along promptly with the other goods he ships you. And you save that extra account on your books with the extra monthly check.

Yes, there's a **Seal-Leak** for every milk-joint closure in your entire plant. Exact to size and thickness — always a perfect fit.

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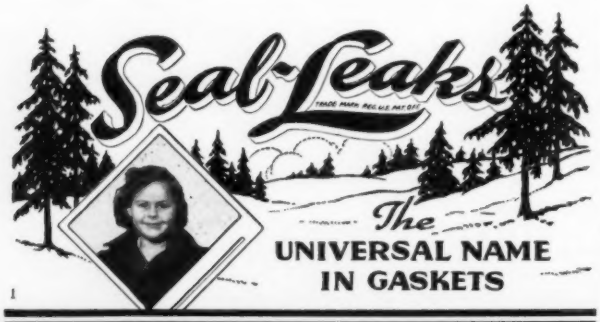

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A Careful Analytical Study of of the position of Butter, Eggs and Dressed Poultry . . .

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We have not tried all of the spray materials which are sold as mold inhibitors. Perhaps the commonest of these is formaldehyde and its close relatives. Where this material is used, all foodstuffs must be removed and the formaldehyde condenses on surfaces, especially wet surfaces, and the vapors do not penetrate effectively. It does sterilize the air effectively but good mold control requires elimination of mold growth and we have never seen a fumigation which effectively inhibited later growth. The work involved in fumigating is too great to make it a routine practice.

It seems best to approach the problem from the other angle. We have had most success where rigid plant sanitation was employed; good housekeeping, elimination of food residues, and general sanitation will keep the mold count low. In addition, we should investigate possibilities for packaging the product under conditions where as little air as possible is present in the finished container. We realize this is difficult in cultured milk products but the elimination of air spaces will prevent mold growth.

LET'S TALK ACCOUNTING

(Continued from Page 10)

poration, making them part owners. Can you give me any ideas as to which might be better?

ANSWER NO. 2. There are many questions to consider in judging whether the partnership or corporate form of proprietorship is the better one for any given case. The two main advantages of a corporation are its perpetuity and the limited liability of its owners (stockholders). An advantage of a partnership is its ease of doing business without the formality that attaches to the corporation. Potential income taxes must always be a factor these days in deciding on any major business step. The members of a partnership are taxed on the entire earnings of the partnership, whether or not withdrawn. A corporation is taxed on its earnings, at slightly higher rates than individuals in the lower brackets, and at lower rates in the upper income brackets. But corporate earnings distributed to owners as dividends are taxed again to the stockholders at personal income tax rates. Just what fix you would be in could be determined only by a full review of the present facts and a pretty accurate estimate or forecast of the future. Another thing to bear in mind is, the Bureau of Internal Revenue always looks with a jaundiced eye on so-called family partnerships, and often disallows, for tax purposes, a family partnership. This can be very important if the partnership earnings are great enough to result in a tax benefit if the earnings are split among two or more individuals. The question of perpetuity may be an important one to you. If a partner dies, the partnership ceases to be, and the paying off of the deceased's heirs may be a problem. If a corporate stockholder dies, the corporation is not at all affected, but goes right on being. The heirs can vote the deceased's stock at corporate meetings, but under most circumstances, that's about all. The best possible advice I can give you in your problem is to review all these and other matters with a good attorney at law before deciding, and be guided by his advice. You will need a lawyer to incorporate anyhow, and you certainly should have one to draft a good and binding partnership agreement if you use that form of proprietorship.

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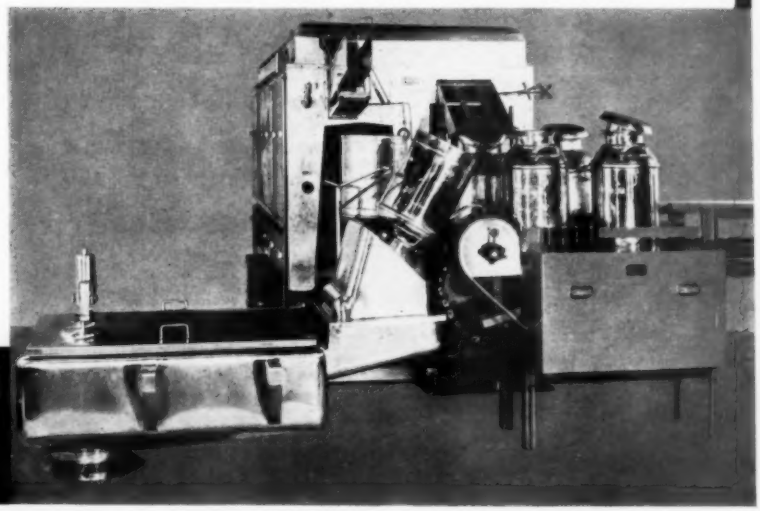

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Footnotes for Fieldmen

Low Cost Lab Service Boosts Wisconsin Quality Control Work

Alumni Research Foundation Has Testing Service Priced Within Reach of Small Operators

WISCONSIN'S recent adoption of new minimum standards for milk production and marketing has placed great emphasis on the value of the testing services offered to dairies by the laboratory of the Wisconsin Alumni Research Foundation.

Working in close co-operation with state and local regulatory officials, the W.A.R.F. laboratory at Madison makes it possible for the smallest dairy in the state to obtain, at low cost, the services of a testing laboratory. Complete in every detail, the W.A.R.F. lab service could be duplicated in the dairy plant only with an expenditure of several thousands of dollars.

Laboratory tests conducted on a monthly basis assist in maintenance of high quality, and make it possible for individual dairies to earn W.A.R.F. certificates of quality. These are visible awards for monthly achievement which serve as an incentive for record improvement, and also gain public approval.

Improvement of quality is the underlying theme of the testing program, according to Dr. Henry T. Scott, director of biological research for the foundation. The tests allow control of the farmer-producer and tend to keep dairy standards high. Indirectly, they help the farmer obtain more income from his herd.

Pasteurize All Milk

Under the new Wisconsin law, every plant receiving milk directly from producers is subject to a bacteriological test of the milk delivered by each producer at least twice a month. In addition, the law prescribes that after January 1, 1950, all milk destined for human consumption be pasteurized.

The W.A.R.F. testing service was instituted some two years ago by Dr. Scott and his staff. Since its inception many boards of health have requested its assistance, and statewide use of the W.A.R.F. laboratory by dairies in all but two counties attests to the importance of the service.

The subscribing dairies, all within 24-hour shipping distance of Madison are put on a regular schedule for testing purposes. Special sterilized bottles for raw milk and packing cases that can be iced are furnished by the laboratory to insure proper preservation. All samples reach the laboratory within 24 hours, thus duplicating the conditions under which the consumer ordinarily receives the dairy's product.

Make Five Tests

Five major tests carried out by the W.A.R.F. laboratory are available to the dairies of the state. They include standard plate count, coliform count, phosphatase test, butterfat determination, and acidity test.

STANDARD PLATE COUNT – This test determines the number of viable bacteria per cubic centimeter of milk. It is available for raw milk tests, as well as for tests on pasteurized samples. The bacteria count of the sample is checked against the Wisconsin maximum count for milk – 50,000, and cream–60,000.

COLIFORM COUNT–Determines relative amount of contamination oc-

XUM

MICHIGANDER TO EUROPE

William F. Richards, 50, for 26 years with the Wyeth Incorporated, milk processing plant, Mason, Mich., and plant manager for 22 of those years, flew to Paris in January to spend four or five months helping Europe establish a milk industry. He will help iron out technical problems of building and operating milk-drying plants.

In 1946 Richards and his four sons, Bill, Tom, Jim and Jack Richards bought their own milk-processing plant at St. John's, Mich.

curring within the dairy plant. Periodic tests tell the individual dairy whether or not its coliform count exceeds the Wisconsin maximum.

PHOSPHATASE TEST – Indicates conclusively whether or not the pasteurization process has been complete. This test is essential since Wisconsin law now requires that all milk marketed by dairies for human consumption be pasteurized.

BUTTERFAT DETERMINATION –Standard Babcock tests for butterfat content are provided as a regular W.A.R.F. laboratory service.

Complete monthly W.A.R.F. reports give the dairy operator valuable assistance in preparing necessary records required by law.

Extensive use of the W.A.R.F. testing services by dairies is expected to contribute greatly to the progress of Wisconsin dairying and help the state maintain its pre-eminence as "America's Dairyland."

By A Voluntary Educational Process Wisconsin Is Promoting Quality

Sanitary Milk Production and Marketing Have Been Contantly Improved Through an Effective Teaching Campaign

By ROBERT E. KOEHLER

WISCONSIN boasts a long record of service in promoting quality milk production. The Badger state's first dairy law goes back to 1866 when legislation was passed to prohibit the sale of watered milk, milk that was tainted, or milk partly soured for want of proper care of milk utensils. The law further prohibited the cheese-maker from skimming off any of the cream. At that time Wisconsin had only 30 cheese factories which were producing about one and one-half million pounds of cheese.

In 1879 the legislature passed a law which prohibited the adulteration of food, drugs and drinks; in 1885 another law prohibited the manufacture or sale of any article intended to take the place of butter or cheese. But the abuses which were harming the growing dairy industry continued for there was no enforcement agency to handle violations.

Then in 1898 the late Governor W. D. Hoard – recognized as founder of the industry in the state – organized the Dairy and Food Commission. Since that time the Commission has been considered a law enforcement agency by the legislature and in 1929 it became the Dairy Division of the State Department of Agriculture.

This the idea of quality milk is nothing new, but Wisconsin dairymen realized that more than laws were needed to improve the standards of their industry. Included in the earlier sections of the laws were articles permitting dairy and food inspectors to be educators as well as law enforcement officers. The word "education" has been the nucleus of the quality milk program down through the years.

While the program has been a gradual process, the campaign got a real shot in the arm in 1938 when a statewide voluntary educational project was set up. When the federal statutes were amended to cover interstate milk shipments in that year, the dairy industry decided it was time to do something about sanitary milk production and marketing.

The result was a quality improvement campaign carried out in practically every rural school district in Wisconsin from 1939 to 1942 through the cooperation of the State Department of Agriculture and the University of Wisconsin's College of Agriculture. In rural schoolhouses throughout the state, meetings were held for the purpose of discussing simple and easy methods of producing quality milk.

The theme of the district meetings was essentially this: Dependable quality tends to discourage the use of so-called substitutes. Also stressed was the point that 90 per cent of the farmers were really attempting to pro-

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IT'S A FACT
EDW. A. JOSEPH
IF YOU SERVED A DIFFERENT KIND OF CHEESE EVERY DAY IT WOULD TAKE YOU ALMOST A YEAR TO REPEAT YOURSELF
MOVIE SOAPSUDS IS REALLY WHIPPED CREAM!
EMPTY QUARTER
THE LITTLE KNOWN LAND OF THE SAHARA-ARABIA REGION, HAS VERY LITTLE WATER—WHAT WATER IS FOUND THERE IS SO SALTY THAT THOSE THAT GO THERE FOR A SEASON HAVE ONLY THE MILK OF THEIR CAMELS TO DRINK
IN A NUMBER OF AFRICAN TRIBES
PRIOR TO MARRIAGE, THE BRIDE HAS TO WAIT UNTIL THE COWS ARE EATING YOUNG GRASS AND AFTER DRINKING THE MILK FROM THESE COWS FOR SEVERAL MONTHS CAN THEY MARRY

duce a good quality product and consequently they were suffering at the hands of a small percentage which lowered the quality in general.

To summarize the thoughts behind the local meetings:

"The proof of the farmer's ability to produce a superior product appears in the quality of the milk or cream when it reaches the plant. Thereafter, it becomes the plant operator's responsibility. Farmers must realize that milk or cream, more than any other food products, are produced under conditions that require constant precautions to avoid contamination. Furthermore, it is a food produot whose quality is readily impaired. Consequently the importance of watching the little things in milk and cream cannot be over-emphasized."

The 4-H Clubs also participated in the all-out program for quality improvement with demonstration teams. Their influence has been great because they are presented by members in the prospective communities who can more readily impress producers. The dairy manufacturers found that they had at their command one of the most effective means of promoting quality improvement without any expense to themselves. In 1939 177 dairy teams worked in Wisconsin, giving demonstrations at annual meetings of plants, at picnics, at community meetings — in fact at any gathering of milk producers and their wives.

Nor did the activities of the program let down during the war period. Dairy officials emphasized the contributions made by the industry on the home front. In 1943 and 1944 a milk house and cooling tank program made great strides. Studies of spoiled milk coming to some typical dairy plants indicated that over 80 per cent of the losses from poor milk were due to either utensil contamination or poor cooling, or a combination of both. Officials realized that at least part of the problem could be solved with the construction of better milk houses. Models were exhibited at fairs, including the state fair where over 300 visitors in one year asked that they be sent plans.

The Wisconsin Dairy Federation, a non-profit organization whose aim is to protect the state's dairy markets, four-fifths of which lie outside Wisconsin, was formed in 1946. Membership includes representatives from the state agricultural agencies and six dairy plant owners and six producers, each representing one of the branches — whole milk, butter, cheese, evaporated milk, powdered milk and ice cream. Standards for producing and processing milk proposed by the Federation have been written into an order by the State Department of Agriculture.

One of the features of the quality program has been a traveling dairy exposition which was seen by 85,098 persons at 37 stops in 1947-48. The touring project covered such topics as milk house plans, running water and electric service, floor plans for dairy barns, economic dairy information, udder and managed milking, and insect and mastitis control. Playing an important role in the quality milk program, of course, have been the plant operators and their fieldmen, whose work was described in an earlier article. Through the cooperation of all segments of the industry, a genuine enthusiasm in the campaign's objective has been created among producers and processors. In a manual issued in 1948 to promote the follow-up phase of the program, the committee had this to say:

"While the interest is now keen; while farm people are in a receptive mood; while dairymen have money; while so many people are ready to help — is the time, we believe, for us at the College and you folks in the counties to get action on wide adoption of practices promoting quality."

Stop The Brannan Plan Is War Cry At Indiana Convention

Administration Proposal Gets Rough Treatment at Biggest Hoosier Meeting—Selling, Quality Given Major Attention

THE BRANNAN PLAN for supporting agricultural prices was whittled down to the well known nub at the annual convention of the Indiana Dairy Products Association. Held in Claypool Hotel more than 600 Hoosier dairymen heard Bill Gordon, editor of the *Dairy Record* and Bryan Blalock of Marshall, Texas give the proposal a hot bath of adjectives.

President Thompson called the convention to order at a luncheon meeting Monday, January 16. Speakers were: O. E. Anderson of Columbus, Ohio, secretary of the Ohio Dairy Products Association, who spoke on "The Long Look Ahead"; Thomas Hasbrook of Indianapolis, Eli Lilly & Company public relations director, a blinded veteran of World War II, who talked on "Human Relations in Industry"; Prof. L. C. Thomsen of University of Wisconsin, on "You Set Your Own Profit Aim"; and Dr. R. W. Elrod of Indianapolis, state veterinarian, who discussed "An Emergency Dairy Health Problem."

In his talk, Dr. Elrod told Hoosier dairymen that they faced a possible loss of out-of-state markets next year if new Federal regulations on the control of tuberculosis in cattle is not met.

Trio of new officers elected at Indiana convention are "Dick" Larson, re-elected Executive Secretary; C. Floyd Byers, President; and Walter Roberts, Treasurer.

Mr. Anderson stressed the importance of dairymen "to get into politics to combat moves of the Government to control the dairy industry."

On Tuesday afternoon, the Ice Cream and Milk Products Division held sessions. Howard Grant of New York City, publisher of Ice Cream Field, Robert C. Hibben of Washington, D. C., International Association of Ice Cream Manufacturers, and W. A. Klepper, Cloverleaf Sealtest Creameries, of Huntington, Ind., were the speakers at the Ice Cream Division meeting. Speakers at the Milk Products Division were: Robert Remaley of Chicago, Kraft Foods Co., and E. M. Norton of Washington, D. C., USDA, Production and Marketing Administration.

In his talk, Mr. Grant stressed the importance of "the American home as the No. 1 objective for 1950". He urged ice cream interests to put the "dramatic touch" in their selling and extension of vending machine selling in movie theaters and other key spots.

Mr. Hibben said that Indiana ranked eleventh in per capita conconsumption of ice cream and that twice as much ice cream is being consumed now as compared to ten years ago.

Last year, he said, the national production of ice cream was two billion quarts in this country. Vanilla still leads in ice cream flavors, with chocolate and strawberry second and third.

Mr. Norton said that the dairy farmer is getting less by 25 per cent for his milk and butterfat than in mid-1948, but he said that we can expect an expanded sales volume. Government price supports, he insisted, helped to stabilize the industry.

At the final sessions, January 17, William Gordon of St. Paul, Minn.,

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PENN STATE MILK COURSE

The 1950 Market Milk Short Course class at Penn State consisted of 52 men representing some phase of the fluid milk industry or allied interests in ten different states. Top honors in the course went to Palmer S. McGee of McGee Dairy, Roaring Spring, Pa. James Holeman of Midwest Dairy Products, Paducah, Ky., stood second; while John W. Snee of Snee Dairy Co., Pittsburgh, Pa., was third.

editor of *Dairy Record;* J. R. Thompson, president of the Thompson Dairy Co., Seymour Ind.; Prof. Gregory and Bryan Blalock of Marshall, Texas were the speakers.

In his climactic address, Mr. Blalock "stole the show" with his dramatic denunciation of the Brannan Plan, which, he asserted, "is the worst deal ever concocted by us Democrats to get votes."

"With 2,300 agencies, the gang in Washington wants to control everything in the United States. Why, it would take an army of government employees to enforce the Brannan Plan, and every other person in the nation would be a checker-upper. The farmer's wife would have to go to the Court House to get her egg money, and who wants that, I ask you?"

Mr. Gordon also attacked the Brannan Plan and questioned its value for the industry. He pointed out that if it is adopted, it would mean that every person knows he is just transferring his grocery money to his tax money, and that the Brannan Plan would cost at least $1,600,000,000 for dairy products alone.

Mr. Gordon said governmental reciprocity trade agreements run counterwise to support price policies and would create a "merry-go-round" which would result in "some day the farmer may be able to buy butter from New Zealand at a good price while he was selling his own butter to the Government."

New officers elected are: C. Floyd Byers, Goshen Milk Condensing Co., Goshen, Ind., President; Walter V. Roberts, Wm. H. Roberts & Sons, Indianapolis, Ind., treasurer; Prof. H. W. Gregory, Purdue University, ex-officio member of Advisory Board; Clem K. Thompson, Thompson Dairy, Inc., Columbus, Ind., retiring president, Frank Palmer, Jr., Reliable Dairy, Inc., South Bend, Ind., and C. L. Witham, Indiana Condensed Milk Co., Indianapolis, Ind., other members of the Advisory Board.

Auxiliary Division officers named are: Quality Improvement Division, Wm. C. Jamison, Kraft Foods Co., Sullivan, Ind., chairman; Irvin C. Scharf, Purity Maid Products Co., New Albany, Ind., secretary. Butter Division – R. F. Heine, Sherman White & Co., Ft. Wayne, Ind., chairman; Floyd E. Tyrie, Schlosser Bros., Inc., Indianapolis, Ind., secretary. Ice Cream Division – H. Wilber Hardacre, East Side Jersey Dairy, Anderson, Ind., chairman; J. L. Stout, Borden's-Furnas Division, Lafayette, Ind.; secretary. Milk Distributors Division– H. T. Perry Banquet Milk & Ice Cream Co., Indianapolis, Ind., chairman; Herbert H. Wesling, Allen Dairy Products, Inc., Ft. Wayne, Ind., secretary. Milk Products Mfgs. Division –Lyman Langford, Armour Creameries, Rochester, Ind., chairman; William A. Wilson, Farmers Cooperative Creamery, Crawfordsville, Ind., secretary.

The Indiana Dairy Boosters Association elected the following officers at their Annual Business Session held Tuesday, January 17: Earl Burns, Owens-Illinois Glass Co., Indianapolis, Ind., president; Bernard Mahan, Cowles Chemical Company, Indianapolis, Ind., vice-president; and Russell Oberlies, Bessire & Co., Indianapolis, Ind., secretary-treasurer.

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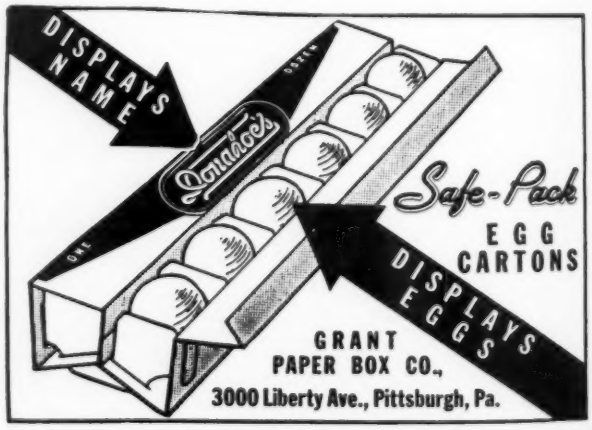

Government Seeks Way To Get Out Of Dairy Business Anderson Says

Present Support Level Is Mandatory, Dairy Head Tells Texas Group — Fifer Sees Butter Comeback

WITH characteristic disdain for the small concept the Texas Dairy Products Institute gave its 42nd annual meeting over to a consideration of dairy problems that ranged from cow to consumer. Pouring on the coal with a brilliant collection of speakers that included T. Kline Hamilton, President of the Milk Industry Foundation, and Don Anderson, Director of the Dairy Division of the Production and Marketing Administration, there were few areas in the dairy business that the convention failed to embrace.

PMA's Anderson Speaks

The business session, with President Lorin A. Boswell presiding. Don Anderson, Dairy Division, U. S. Department of Agriculture, spoke on the matter of the surpluses which the federal government has bought because of the parity laws

Mr .Anderson who was presented by Mr. Collier, declared that the sooner the government can get out of the dairy business the happier he and his associates in the dairy division will be. He then quoted one of the speakers as having said that all the dairy industry needs do to remove the surplus is merchandise its products.

He stressed the thought that the dairy industry can avoid price control and surpluses through its own efforts. Mr. Anderson told of the selling of 15 million pounds of powdered milk in 1947. He then said that the dairy industry may be as wrong concerning demands for its dairy products in 1950 as they were in 1948.

Mr. Anderson stressed the fact that the act of 1949 which has to do with dairy surpluses says the Secretary of Agriculture "shall" support milk at 90% of parity and leaves him no option. This, he pointed out made it compulsory for the department to buy. He stated that only 3% of the volume produced has been bought by the government. He declared that two less rains in Minnesota would have put the government out of the dairy business.

Two Methods of Support

He said that he does not know whether the requirement for support at from 75% to 90% is too high or not. He stated that there are only two methods by which the department can support dairy products. These are by purchasing or by making loans and that purchases have been made.

Mr. Anderson then turned to what has been done and why it has been done. First, he placed as the objective support so that the producers of dairy products may receive an adequate return. Next, he placed the encouragement of dairy farmers and dairy plant operators to obtain a better quality product.

Then the placing of the responsibility for production on farmers and plant operators. This would encourage an improved plant marketing system. A problem faced, Mr. Anderson stated was to determine where to make purchases to keep the prices on a level and also determine which products should be purchased.

Mr. Anderson pointed out the fact that Congress picked evaporated milk as a product to be supported by purchase. In this connection, he explained that the first period of operation was set at fifteen months because should the period end December 31 the stocks would be low. The fifteen month period will end the time in March when stocks are not so low.

Flexibility Would Help

He indicated that flexibility in the law would be helpful and stated that if the law is continued the program will be on a twelve month operating basis. Mr. Anderson then referred to the seasonability of butter and stated that the department could have dropped its price and made a profit on the butter stored. He emphasized the thought that the dairy division is not competing with the dairymen.

Mr. Anderson closed by urging the dairymen merchandise their products and make the responsibility of the disposing of the surplus their own responsibility. He pointed out the regional problems affecting the sale of butter and other dairy products.

"Butter Makes A Comeback" was presented by Russell Fifer, Executive, American Butter Institute. He opened with the statement that the dairyman should not count butter out citing the

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Fig. No. 120

THE SCHLUETER CO.
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fact that 10% more butter was sold in 1949 than in the preceding year. He also stated that in some stores butter has been 25% of the dairy products sold.

Mr. Fifer called attention to the fact that in June the supply of fluid milk is too great for the demand and that butter takes up this milk and fills the gap for the producer. He gave as a means of avoiding having the government in the butter industry the merchandising of butter.

He spoke of the waiting lines when butter was on the restricted supply during World War II, cited the fact that butter is cheap compared with other products. Here, he urged merchandising to make the people realize that it is a good buy.

Mr. Fifer spoke of the delicate flavor of butter, the need for attractive packaging, the assuring of sanitation where cream to be used in milk is obtained. He also suggested brand advertising. He asked for the training and retraining of the salesman who meets the trade.

Today's Product Better

He stated that the butter of today is better than that of ten years ago and told of the probability of the requirements to be set up by the Food and Drugs Administration. He called attention to the emphasis put upon sanitation by the filling stations which advertise clean rest rooms and sell gasoline.

Mr. Fifer illustrated the superior value of butter in use for preparation of various types of food in restaurants with the story of a woman who started a place in Evanston, Illinois, four years ago and has made an outstanding success in four years, having used butter in seasoning spaghetti and other foods, especially sauces.

Mr. Fifer called attention to the ways in which Pillsbury and other product manufacturers are advertising their product in combination with the use of butter. He stressed the need for advertising to build good public relations, specifying the values of recipes. He closed with the suggestion that brand names should be advertised in a way to bring the thought that will make the butter suggestive of pleasing qualities.

Industrial Responsibility and Selling Get Top Billing At Ohio Conclave

Hamilton Sees Business Statesmanship and Competition as Prime Ammunition in Democratic Arsenal

THE RESPONSIBILITY of industry in maintaining the free enterprise system was hammered home by top-notch speakers at the Ohio Dairy Products Association's Annual Convention held in Cincinnati late in January. Breaking all previous attendance records, 779 dairymen heard T. Kline Hamilton, President of the Milk Industry Foundation and a working milk dealer in the Buckeye capital city, declare that industrial statesmanship and legitimate competition were the best means of proving the democratic way of life.

Buttressed by such speakers as L. L. Ray, Secretary of the North Carolina Dairy Products Association and Dr. Gasto Foote, Pastor of the Methodist Church in Dayton and formerly an exchange minister in Denmark, the convention probed into the great problem of freedom and industry's responsibility to freedom. Cut-throat competition, low quality products, and unethical operations were described as the triple evils that undermine public confidence the traditional American system of business life. The inevitable result of this unfortunate type of public relations is a demand for more government control.

Inspection and Quality

Getting down to more specific considerations, members of the Milk Products Manufacturers, Inc. came to grips with the problem of quality control. In a spirited panel discussion platform inspection vs. farm inspection the subject of inspection and its relationship to quality was given a thorough going over. Concensus of the panel was that both methods must be used to gain a top quality milk. The emphasis on quality and the need for the production of a quality product was a practical expression of the more general discussions of previous speakers on industrial responsibility.

Ice cream distribution got a slap on the wrist from a panel of able young dairymen who conducted an excursion into the subject of "Let's Teach Our Buyers To Sell". The Panel, composed of Webb Jennings, Dairymen's Ohio Farmers Milk Company of Cleveland, Henry Page, Jr., Page Dairy Company of Toledo; and Lester Stauffer, Warren Sanitary Milk Company of Warren, sharply criticized the ice cream operations of the past which have lead many retail outlets to conclude that the best method of operation was to have ice cream manufacturers bid against each other for their outlets with little thought being given to better sales methods.

Buyers as Salesmen

Rather than spending time and effort trying to capture each others customers the panel felt that the energy should be expended in developing real sales techniques among customers with a constantly expanding market as the ultimate goal. Price cutting, elaborate credit arrangements, subsidies in the form of down payments on soda fountains and similar considerations were not valid substitutes for honest to goodness selling, the panel members concluded. The ice cream vendor who comes in direct contact with the consumer is the individual who, in the last analysis must do the selling. "Let's teach that man to sell", was the concensus.

In a unique forum program presided over by Secretary "Andy" Anderson, Ohio Dairy Products Association, and E. L. Cavitt, Secretary of the Stark County Dairy Products Association, dairymen asked their own questions and the group provided the answers. This particular approach to problem solution, lacking the usual formal speeches, proved to be an exceedingly stimulating session.

Social highlight of the meeting was the annual banquet with its entertainment provided by the Ohio dairy booster group. Attendance was fifty persons greater than the previous high.

XUM

MEET THE SECRETARY

M. G. VAN BUSKIRK

DURING the middle of December last some 2200 dairymen gathered at Chicago's Hotel Morrison to participate in the 17th annual meeting of the Illinois Dairy Products Association. They were all there, the long and the short, the fat and the lean, the gay and the melancholy, all there, welded together into a compact dynamic organization. They listened to an impressive array of speakers, partook of a variety of luncheons and dinners, banged a bit of the grape, and then took their leave. Behind them, grasping a hand here and patting a back there, his iron grey hair still unruffled by three days of powerhouse conventioning, they left the prime-mover of their meeting and their association, a medium built man and a friendly man who packs the big kick. He answers to the name of Van Buskirk, M. G.

Thirty-five years ago Hillsdale College in Michigan sent young Mr. Van Buskirk out into a world that in retrospect was a remarkably simple affair. For a number of years "Van" expended his talents in educational and religious work. By 1925 there was a fork in the road, Mr. Van Buskirk took the one that lead to business and the trade association. He became associated with Louis Nielson of the Pioneer Creamery Company of Galesburg, Illinois. A few years later when the Pioneer Creamery Company and the Beatrice Creamery Company were merged he stepped into the job of procurement manager for the new organization. From there the road lead straight to his present office. He became full-time secretary of the Illinois Dairy Products Association in 1936.

The I.D.P.A. is about as close to a personal creation as one man is likely to come. There had existed in Illinois two dairy associations prior to the birth of the present association. As secretary of the Illinois Butter Manufacturers Improvement Association Mr. Van Buskirk had labored mightily to bring about an amalgamation of that organization with the Illinois Ice Cream Manufacturers Association. At the same time he was assisting at the birth of a third group known as the Illinois Milk Dealers Association. The fruit of his efforts was the integration of all three into the single powerful body that operates as the Illinois Dairy Products Association.

The association has worked effectively in legislative fields and has cooperated with various state, educational and enforcement agencies in fostering a quality-conscious, hard-hitting, aggressive dairy industry. "We are proud of our record at Springfield", says Mr. Van Buskirk, "chiefly because of the recognition on the part of state officials and General Assembly members of the work we have been trying to do in interpreting the needs of the industry and defending it against attacks. We have yet to lose our fist fight. Some of them have been honeys."

There are a few jobs that require as much diplomacy and tact as the job of trade association secretary requires; Secretary General of the United Nations and Director of ECA are a couple that come to mind. A secretary's task is one of persuasion. He must be all things to all members. He must have an iron constitution, a disposition of perpetual sunshine, an inexhaustable supply of energy, and a copious supply of crying towels to be distributed freely among the membership. He must be a speaker of more than ordinary ability possessed of a stomach capable of absorbing an endless succession of Roast Breast of Spring Chicken and Fresh Green Peas. To these exacting standards the pleasant gentleman at 306 West Jackson Boulevard measures up completely.

The very best testimony to his skill in his difficult calling is the 2200 gentry of the milk and cream fraternity who made the 17th meeting of the Illinois Dairy Products Association the biggest state meeting in the history of the industry.

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Into an area 13 feet 10 inches wide and 26 feet 3½ inches long plus a small alcove to the right of the operator has been arranged the can washer and the conveyor system having a total capacity of 108 cans. In this picture inverted cans are starting their journey through the washer while washed can is emerging right side up.

RETURN LINE CAN WASHER USED TO LICK SPACE PROBLEM

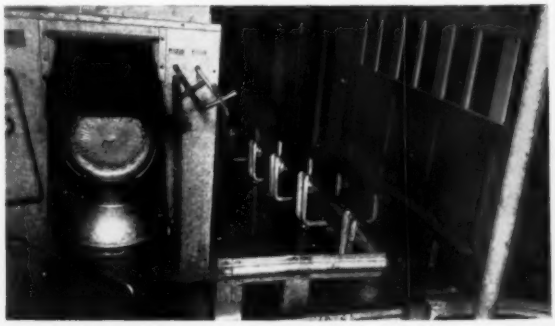
Cramped for Room, Albany Dairy Uses Everything but Pant's Pockets to Get Efficiency

SPACE IS always a problem. In new construction it is a matter of saving those dollars per cubic feet. In buildings already up it is solving the riddle of where to put what is needed and still have room in which to operate. Up in Albany, New York, where the old Dutch influence is still apparent, there is a fine example of how a space problem was solved by the simple expedient of purchasing a piece of equipment that would fit into the available area.

Norman's Kill Dairy occupies a fairly narrow piece of ground on the hill that is the city of Albany. There is no room for expansion of the physical plant except up in the air. A portion of the rear wall, for example, is also the rear wall of a church. Yet in these quarters are all of the elements that are needed to handle 20,000 quarts of milk a day, except the cows; all of the usual processing equipment plus offices, plus ice cream plant, plus garage, plus a stable for more than twenty horses. It took some doing to get it all in there but it's there and efficiently so.

Not long ago the can washing situation grew to a point where the rotary washer then used could not keep up with the volume of cans coming in. A new washer was needed and it had to go in a space no larger than a fair-sized living room. A straightline washer would require additional space, a need which if fulfilled would have placed the weigh pan in the middle of Hudson Avenue. The problem was solved by using a return line can washer. A conveyor system that involves three 180 degree turns was developed. Between the can washer

Crowded hip to thigh in this small alcove are four conveyor lines involving three 180 degree turns and a constant movement upgrade. The alcove is 7 feet 8 inches wide.



Clean cans move down the conveyor and may be taken off either at door shown or at door in rear. Conveyor for incoming cans is low down between door and conveyor shown.

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and the conveyor system the arrangement has a capacity of 108 cans.

The degree of concentration and the effectiveness with which this concentration makes use of the available space is almost fantastic. Between the tailboard of the truck on the unloading platform and the nigh side of the washer conveyors for incoming and outgoing cans are arranged edge to edge with just enough room left over for a man to get at the interior of the washer. On the off side there is about three feet between the wall and the washer until the wall makes a right angle turn away from the machine. In this wider space the weigh can and dump tank are located. Between the end of the machine and the walls there is just enough room and that is all. On the business end there are two conveyors making right angle turns into and out of the machine, a platform on which the weigher stands, and a stainless steel desk-stand arrangement for his record sheet.

The can washer and the conveyor arrangement both exhibit certain technical developments that make them peculiarly adapted to limited space factor in this installation. The conveyor system lifts the cans about three feet in the course of their journey from the truck to the weigh can. As the crow flies this is a distance of ten feet but as the conveyor goes with four switch backs and three 180 degree turns there is probably sixty feet of incoming conveyor which enables the trucker to unload his cans and get around to the empty can receiving platform without loss of time. The unique character of the conveyor are the sharp 180 degree turns.

The washer is working out well according to officials at the dairy. At the present time it is operating at 10 cans per minute but is built to work up to sixteen cans per minute. The cans go into the machine and make a U turn during their travels which brings them out of the washer about one can away from where they went in. The operator is, therefore, in a position to handle both in-going and out-coming cans. The washer has two pre-rinse stations, a drain, three washing stations, a drain, a rinse station, a drain, 4 steam stations, a drain, and two cold air stations.

The dump tanks are in a pit below the weigh can. From the dump tank the milk is pumped straight up two stories to the holding tanks. From the holding tanks it is down hill all the way to the bottling machine.

●

PRESENTING THE LADIES

(Continued from Page 20)

meeting in progress where the boys are getting the fast pitch on selling. But you are not so much impressed with the pitch as you are with the caliber of the routemen with their unifroms and their solid appearance. You go through the plant and note the neatness, the good housekeeping, the laboratory, the garage, the attention to detail and to sanitation coupled with a sense of relaxation that says there is always time to do the job right. And then you realize that the philosophy of the organization is that the way to run a milk business is to have capable people, properly trained, properly equipped, intelligently managed, with a quality product to sell.

Take about five feet three or four inches of pleasant, personable woman, mix with it a judicious portion of dynamite and you have Myrtle E. Viall. She is active in the affairs of the community and the dairy business. She is the first woman to be a director of the Rhode Island Milk Dealers Association. She is a past matron in the Eastern Star and a member of other civic and business organizations. But she is above all else the unquestioned boss of one of the smartest milk plants in New England.

She had to work to get there. It was a long trip made the hard way. But she got there and the reason that she got there is purely because she has what it takes to travel that exacting high road.

Editorally Speaking

(Continued from Page 34)

band set forth to rescue Will Stutely from the hands of the Sheriff of Nottingham. "Strike no man without need," said bold Robin, "for fain would I avoid bloodshed, but if ye do strike, strike hard and see that there be no need to strike again. Then keep all together until we come again to Sherwood, and let no man leave his fellows."

Know whereof you speak and then speak. Know the logic of your acts and then act. Let's get out of this pussy-footing don't-quote-me routine. If we believe in ourselves and our industry, if we believe in our convictions and ideals then let's stand up where the world can see us. Let's stand up and be counted.

Here's the NEW and BETTER WAY!

To Handle Your
Composite Milk Samples
With the
Compo-Cooler
Refrigerated and Insulated

Successful Milk Plant Managers in every section of the country have bought and are using **Compo-Cooler** Sample Bottle Cabinets.

One of the many reasons is that **Compo-Cooler** handles your composite milk samples rapidly and at a big saving of time and labor.

Compo-Cooler gives you complete electric refrigeration. All cabinets are life-time stainless steel throughout with a capacity, style and size to fit your particular plants need.

FREE Write today for illustrated booklet and complete details.

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'FRIGIDRY' DAIRY CULTURES
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Save Time—Save Money—Avoid Trouble. Use rapid-growing 'Frigidry' cultures to produce mother culture in one generation and take guess work out of making good buttermilk, butter and cheese.

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LYOPHILIZED* for
UNIFORMITY
•
VIABILITY
•
STABILITY

**New, high-vacuum, sub-zero drying process.*

USING OUR SEPARATOR

Aluminum Display Frame

A FRONT - LOADING aluminum frame, designed to carry advertising messages on the sides of delivery trucks, has been developed by

Arlington Aluminum Company of Detroit for Louis Edwin Ryan, Advertising Agency—Washington, D. C.

The new frame is available in 1" or 1½" wide extruded aluminum and is polished and anodized to withstand adverse weather.

Other advantages consist of loading convenience and flush type fit against truck side. The frames are designed for cards not in excess of .100" thick. To load, the card is inserted from the bottom — pushed up and in, and then permitted to drop into place, firmly supported on all four sides. The cards used should be varnished and paraffined to resist the weather.

Applicable to practically all types of delivery trucks — the front loading frame is attached to the truck side with four short screws.

●

Place to Put The Money

AN after-hours driver's depository, has been designed by the Mosler Safe Company and placed in distribution through its dealers throughout the country. Especially developed for bakeries, breweries, bottling plants, dairies and other companies employing driver salesmen, the new depository provides protection for otherwise vulnerable receipts during the night between the time of the driver's return and the cashier's arrival in the morning. It is equipped with two doors, so constructed that the driver can deposit his receipts through an upper door into a burglar resistant money chest from which they can be removed only through a lower door by the cashier or other employee in possession of the combination.

●

Personal Towels for Cows

A DEVICE which aids production of higher quality milk and promises to help reduce the yearly half billion dollar loss they now suffer through mastitis infection in their herds is a paper towel for cows.

It's a "personal" — use-once-and-throw-away — towel for bossy!

The towel embodies contradictory characteristics—being highly absorbent, yet strong and rugged when wet. It is endorsed by college veterinarians, state milk sanitarians, and scores of leading dairymen who assisted the manufacturer in experimental development phases.

Virtues of the individual paper cow towels, according to veterinarians and dairymen who have participated in development and testing, are: They are inexpensive enough to be practical in

the largest or smallest herd; there is little chance of spreading infection or foreign matter from one cow to another; the soft cellulose product massages a cow's udder, as well as cloth towels do, for ready milk let-down and prevention of injury in mechanical milking; they are easily disposed, and

SAVE TIME . . . SAVE MONEY!

STAINLESS STEEL is the ideal metal for milk plant equipment. Chemically inert to all dairy products, stainless steel does not affect color, odor, or flavor. Easy to clean and rust resistant stainless steel will give years of lasting service.
We are pioneers in the design and manufacturing of stainless steel milk plant equipment. Our engineering staff is at your service—write us your requirements.

STAINLESS & STEEL PRODUCTS CO.
1000 BERRY AVENUE ST. PAUL 4 MINNESOTA

Read the
AMERICAN MILK REVIEW
URNER-BARRY CO.
Publishers Since 1858
92 WARREN ST. NEW YORK 7, N. Y.

the single-service factor eliminates the sterilization, laundering, and drying necessary with cloth—thus saving time and labor. On this feature herdsmen comment, "They get me out of the barn quicker, and keep me out of the laundry."

●

New Filter Disc Cabinet

THE MUCKLE Manufacturing Company of Owatonna 9, Minnesota has developed a new Filter Disc Cabinet. This cabinet has been specifically designed to meet the demands of the Sanitary Code which require that filter discs be kept in original carton in another container with cover closed at all times.

The Filter Disc Cabinet is of all aluminum construction, having a solid bottom and piano-type hinges. Cover has knob for easy opening. Brackets allow for easy fastening on milk house wall. Cover knob also prevents cover from staying open.

Processors name may be embossed or stenciled on cabinet. The very low price on this Cabinet makes it possible for processors to furnish them free to producers.

For further information on the New Muckle Filter Disc Cabinet, write to the Muckle Mfg. Company, Owatonna 9, Minn.

●

Paint Fights Fungus

A HIGH gloss enamel that controls mold and mildew growths has been developed by the Glidden Company for use in dairies, bakeries and other similar food processing plants.

Called San-I-Seal, the new product contains a water insoluble fungicide that does not evaporate or leach out. It dries to a hard, firm surface that will not soften from moisture and allow dust containing food particles, on which fungus spores feed, to adhere to the surface, according to the manufacturer.

Although designed primarily for interior use, San-I-Seal may be applied to exterior surfaces – if the exposure is not severe, such as on ceilings of loading platforms – without affecting its fungi-preventive qualities. It is washable.

Glidden paint technicians say mold and mildew are found generally in bakeries, dairies, packing houses, textile plants, breweries, bottling works and other food processing units, where the fungi frequently cause extreme discoloration of ordinary coatings. In addition, fungi frequently form organic acids which hydrolyze ordinary paint films and afford easy access to the bare wood for the wood-destroying fungi.

Protection against fungi is provided by San-I-Seal for the average period of a good paint job, several years in many instances. It is produced only in white, although it may be tinted if desired, and can be either brushed or sprayed on the surface. One coat is usually sufficient on previously painted surfaces.

Additional information may be obtained from the Glidden Company, 11001 Madison Avenue, Cleveland 2, Ohio.

●

Inspection Light

A NEW TYPE Inspection Light, designated as "Sunrise", is announced by Keenline Equipment Corporation. It consists of a fabricated sheet metal box, electrically welded, 30″ long, 12″ deep, on the top of which is mounted a vent in which an air circulating fan is installed. This Light is powered by G. E. globes specially treated and the fixtures are made as waterproof as possible; also heat resistant.

●

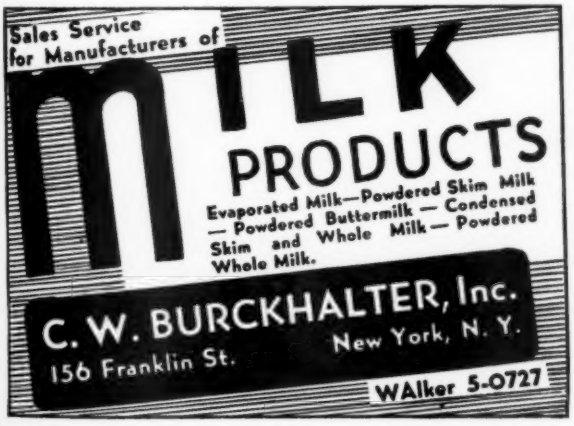
Indiana Milk Producer Solves a Timely Problem

HOW TO INCREASE capacity – yet make a minimum expenditure for new equipment is a problem facing many milk plant operators today.

The installation shown is the solution executed by an Indiana plant.

A new Henszey Effect was installed in conjunction with the existing ser-

viceable coil pan . . . up to double the total output, but with no increase in steam and water consumption. The entire system can now be operated continuously with automatic feed control. Cleaning is accomplished as though the equipment were one unit. With a need for increased capacities (or if original equipment is to be replaced), new Henszey Effects are simply added.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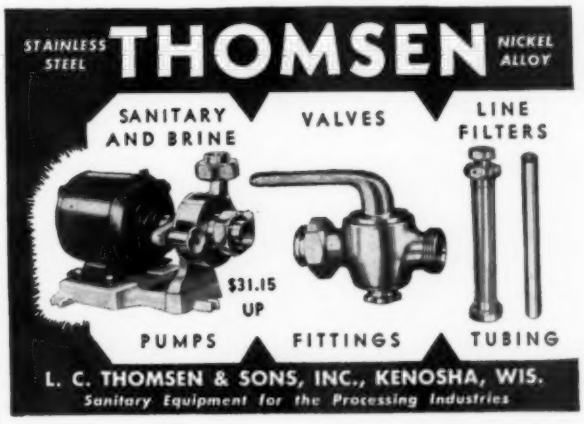

WANTS and FOR SALES

Classified Advertising Rates

(Remittance MUST Accompany Order)

Position Wanted

50 word maximum, 50c — 2c for each additional word.

All Other Advertisements

Lightface type: 5c per word ($1.00 minimum).
Boldface type: 10c per word ($2.00 minimum).
(The name and address should be included in counting the words.)

Keyed Address

25c additional in the United States.
50c additional in Foreign Countries.

When replying to any of the following keyed advertisements please address replies to:

BOX NO.
92 WARREN STREET

AMERICAN MILK REVIEW
NEW YORK 7, N. Y.

(The deadline for Classified Advertising is the 10th of the month preceding publication.)

No classified advertising will be accepted to run with borders or special spacing. All such advertisements are considered "Display" advertising and will be billed at regular display advertising rates. (Rates and mechanical requirements on request.)

EQUIPMENT FOR SALE

FOR SALE — A good viscolizer or homogenizer; also a Manton Gaulin, 125 gallons per hour, in perfect shape at $650, F.O.B. Mayville. Stainless Steel head double stage, in perfect shape. Electric current, 3 phase 60 cycle 220 volts. Can be had at once. Write Baertchy's Dairy, Mayville, Wisconsin. 3-M

FOR SALE — Viscolizers and homogenizers. Completely rebuilt and guaranteed. With standard or late type stainless sanitary heads and pressure valves. Bulletin and prices upon request. Write Otto Biefeld Company, Watertown, Wisconsin. 3-M

We can furnish new and used tight barrels for sweetened condensed milk, condensed buttermilk and for the cooling of milk. Also slack barrels milk powder and other dairy and poultry products. Also egg cases. Write Buckeye Cooperage Co., 3802 Orange Ave., Cleveland 15, Ohio. 3-M-t.f.

FOR SALE — Bobtail soda fountains 5' and 6' complete with pumps and jars, brand new in crates, $350.00 and $395.00, F.O.B. New York Interstate Appliance Co., Inc., 600 Broadway, N. Y. 12, N. Y. 3-M

FOR SALE — Mechanical Cow units, consisting of homogenizer, cooler, 6 quart Taylor Freezer ice cream head, unit. This unit will make milk, cream, or ice cream mix. Formerly sold for $1750.00, now only $1075.00. Brand new, crated F.O.B., N. Y. Interstate Appliance Co., Inc., 600 Broadway, N. Y. 12, N. Y. 3-M

FOR SALE — Sweden Ice Cream Freezers, complete with condensing units, 4-20 quart capacity, brand new in crates, very low in prices. Interstate Appliance Co., Inc., 600 Broadway, N. Y. 12, N. Y. 3-M

REBUILT — Pasteurizers, Milk Coolers, Bottle Fillers, Ice Machines, Plate Coolers and Heaters, Homogenizers and Bottle Washers. Send us your requirements. Ohio Creamery Supply Company, 701 Woodland Ave., Cleveland 15, Ohio. 3-M-t.f.

FOR SALE — One used 6 valve C. P. bottler for both 48mm. and 56mm. bottles. Write Lyle's Dairy, Dowagiac, Michigan. 3-M

EQUIPMENT FOR SALE

EQUIPMENT FOR SALE RESULTING FROM CONSOLIDATION — 1 only, 4-can Damrow Straightway Can Washer, one year old, in excellent condition, $1200.00. 1 only, Chester Stainless Steel Box Type Preheater for use with No. 136 Delaval, $300.00. 1 only, 400 gallon per hour Cherry-Burrell Viscolizer 3 years old, in excellent condition, $2200. 1 only, Milwaukee Nu-line G70 seven valve Filler in good operating condition, $1250.00. 1 only, Sturdy Bilt Bottle Washer, $1150.00. 1 only, R. G. Wright Case Washer, $450.00. 1 only, round 700 lb. capacity Stainless Steel weight can, 2" plug valve outlet suitable for platform scale use, $150.00. 1 only, Oblong 500 lb. Stainless Steel Drop Tank 18" wide x 6' long x 14" high, $100.00. 1 only, Angevine Nu Vat Stainless Steel Cheese Vat 200 gallon. Exterior Aluminum, with cheese knives and paddle. All offered subject to prior sale. If interested, contact The Page Milk Company, Coffeyville, Kansas. 3-M-1

FOR SALE—5000 lb. York Short Time Pasteurizer complete including section for cooling raw milk; 100 to 300 gallon Stainless Steel Pasteurizers; 1000 gallon Cherry-Burrell Horizontal Coil Vats with stainless steel linings and tinned copper coils; G-60, G-160, GV-20, GV-24 Cherry-Burrell Fillers; 4, 6 and 8 Wide Bottle Washers; 200 to 1500 gallon Homogenizers or Viscolizers; about 135 ft. Power Can Conveyor, also 20 ft. Power Case Conveyor with Booster and Power Units; 2000 and 3000 gallon Pfaudler Glass Lined Storage Tanks for by-products only; 3 ft. to 6 ft. Stainless Steel, also Copper Vacuum Pans. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, New York. Telephone: MUrray Hill 2-4616. 3-M

SPECIAL OFFERINGS — Four Jensen Stainless Steel Cabinet Coolers each containing 8 wings, 56 tubes high; Two Mojonnier Stainless Steel Cabinet Coolers, 6 wings each 72 tubes high; Four 14 ft. Specialty Brass Internal Tubular Cooler (or Heater) Sections with ten 2" S.S. tubes, never used; 12 ft. Creamery Package I.T. Cooler (or Heater) with 28-2" stainless steel tubes. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd Street, New York 17, New York. Telephone: MUrray Hill 2-4616. 3-M

EQUIPMENT FOR SALE

FOR SALE — One Michael Yundt Air-Brush bottle washer, Model M-4-36; 8 wide, straight-away; rated at 60 bottles per minute, has been operating up to 90 bottles per minute, both round and square. Good working order. Reason for sale: higher production speeds. Write Martin Century Farms, Inc., Lansdale, Pennsylvania. 3-M

FOR SALE — Mojonnier Double Effect Tubular Evaporator in new condition at attractive reduced price. Continuous operation for producing condensed milk or ice cream mix. Never used in manufacturing. Write Hershey Creamery Company, Box 121, Harrisburg, Pa. 3-M

FOR SALE — One 125 gallon Cherry-Burrell Viscolizer, used very little, purchased new in April, 1949 and is in excellent condition. One used 12 foot I. T. heater or cooler in good condition, 20 two inch tubes twelve feet long. Write Box 278, care this publication. 3-M

FOR SALE — ONE WAUKESHA SANITARY PUMP, Size 10SS, Serial No. ABB8576, New in 1946, used only a few months. TWO 600-GALLON ALLEGHENY METAL-BLUE STAR HOTWELLS, Complete, Stainless Steel, New in September 1946, used only a few months. Contact North American Creameries, Inc., 320 Metropolitan Life Building, Minneapolis 1, Minnesota. 3-M

FOR SALE: Buflovac double roll driers, SS hoods, conveyors, complete with pulverizers, replaced with spray. 32 x 120" Buflovac roll drier, completely SS equipped, very good condition, $3750.00. 120 x 32" Buflovac SS hood, complete with pulverizer, new in 1944, $5000.00. 120 x 42" American drier, SS hood and stack, excellent condition. New 300 gallon Steriline pasteurizer, SS inside and out, also 150 gallon, both shop-worn at considerable discount. Stoelting 4 can Straightaway washer, complete, rebuilt, $800.00. Minnesota Creamery Co., St. Paul 2, Minn. 3-M

FOR SALE — 1 6-20 Cherry-Burrell Bottle Filler (motor driven) $300.00; 1 2-section Cooler with cover (6 feet wide) $150.00; 1 4-wide Sturdibilt Bottle washer $200.00; 1 Preheater $75.00; 1 7½ Gal. per minute McCormick-Deering Separator (motor driven) $75.00; 1 Weigh Unit with platform Scale $50.00; 1 12 H. P. Leffel Boiler $200.00; 1 Babcock Tester $50.00; 1 G-100 Cherry-Burrell Bottle Filler (3 cappers for 48 MM. bottles) (3 cappers for 51 MM. bottles) $700.00; Prices quoted are F.O.B. Newport, Kentucky. All of this equipment was in use in the past 30 days. We will be happy to supply further information if desired. 3-M

FOR SALE — C. P. copper tinned weigh can with stainless steel covers with 6" flush valve, capacity 800 lbs., $50.00; 1-C.P. hydraulic butter cutter for 90 lb. boxes in good condition, no boxes $35.00; 1 Specialty Brass No-Burn milk heater with four passes, three tubes to each pass, ¼" stainless steel, 5'6" long with 1 hp. circulating pump, motor driven, ball bearing, 3 phase, 220 volts, 60 cycle, $250.00, subject to prior sale. Write Anthony Pure Milk Company, Inc., Nashville 2, Tennessee. 3-M

XUM

EQUIPMENT FOR SALE

FOR SALE — Used milk bottles and cases. Attractive prices. Barnett Bottle Co., 825 S. Meridian St., Indianapolis, Ind. 3-M-t.f.

FOR SALE — One (1) Cherry-Burrell ten valve filler, with three capper heads for 56 mm. bottles. Will guarantee machine. Union Farms, 126 E. Douglas St., Freeport, Ill. 3-M

FOR SALE — One Iron Firemen Stoker, complete with 2 H.P. 60c 3 Ph. Motor 250 to 350 lbs. per hour. Perfect condition, ready to install. Bargain for quick sale. Write Vohlken Bros. Dairy Inc., Freeport, Ill. 3-M

FOR SALE—All or part of 40,000, 12-oz. Lily Tulip cheese cups with plain lids. Cartons are printed Superior Dairy Co., Freeport, Ill. Samples on request. Real bargain for quick sale. Vohlken Bros. Dairy Inc., Freeport, Ill. 3-M

FOR SALE — 3¼ H.P. blower units complete with driers and valves. Write Vohlken Bros. Dairy, Inc., Freeport, Ill. 3-M

PLANT FOR SALE

FOR SALE—Grade A milk plant located in eastern West Virginia. 6 routes wholesale and retail. Complete modern equipment. 1949 sales over $100,000. Excellent opportunity for ice cream here. Will sell business and equipment and lease business or will sell all. Write Box 277, care this publication. 3-M

MISCELLANEOUS

FOR SALE — Chocolate Powder and Chocolate Syrup for making Non-Settling Chocolate Milk. Your trial order will receive our prompt attention. Bradway Chocolate Company, New Castle, Indiana. 3-M-t.-f.

FOR SALE — Orange-Ade Base made from fresh oranges. Nothing to add but water, $1.35 per No. 10 tin. Bradway Chocolate Company, New Castle, Indiana. 3-M-t.-f.

FOR SALE — Truck lettering and trademark decals, made for your truck and store advertising. Easy to apply; uniform, distinctive, economical for small or large needs. Write for catalog. Mathews Co., 827 So. Harvey, Oak Park, Illinois. 3-M

I have been advised that there is a roach, water bug, etc., spray apparatus on the market using a compressed gas to distribute the spray. It is supposed to be very effective as it penetrates all cracks, crevices, etc. I would appreciate it if you could give me the name of the manufacturer or dealer of this item at your earliest convenience. Write Box 279, care this publication. 3-M

HELP WANTED

WANTED—Laboratory Control Chemist for large New York State plant. Must have knowledge of manufacturing processes of products along with bacteria and butterfat control. Apply stating qualifications to Box 281, care this publication. 3-M

POSITION WANTED

FOREIGN POSITION WANTED — Dairy industry student will graduate from well known State Agricultural Institute seeking foreign employment in dairy industry. Travelled extensively. Open to complete investigation. Reply to Box 282, care this publication. 3-M-1

EXPERIENCED cheese and butter maker wants change. Reliable, honest, trustworthy, clean worker, expert grader, makes a good product of cheddar and processing, also cottage cheese, pasteurization and testing both milk and cheese. More than 10 years in present position. Eastern States preferred. Write Box 274, care this publication. 3-M

POSITION WANTED — By young man of sound theoretical and practical experience in Live Poultry production and marketing. Is an alumnus of agricultural school and is eligible for on-the-job training under the G. I. Bill of Rights. Desires change to egg or poultry trade. Write Box 272, care of this publication. 3-M

REPAIR SERVICE

THERMOMETER REPAIR SERVICE — Save time and money. Use our "Custombuilt" repair service. All makes of instruments rebuilt like new. Fine workmanship, fair prices and prompt service. Satisfaction guaranteed or money refunded. Write Fr. Fleischhauer & Son, 8936 187 Place, Hollis 7, New York City, New York. 3-M-5

THERMOMETERS — We repair Mercurial Indicating Thermometers, dial thermometers and recording thermometers of all makes. Instruments are reconditioned like new. Satisfaction guaranteed. For economical savings ship your thermometers to Nurnberg Thermometer Co., 124 Livingston St., Brooklyn, New York. 3-M-t.f.

WANTED TO BUY

WANTED — Stainless Steel milk tank trailer, 2 to 3000 gallons, single or two compartment. Must be in good condition. Write The Bennett Creamery Company, Ottawa, Kansas. 3-M-1

WANTED TO BUY—Set of three (3) Kurvetop cappers (51mm) for Cherry-Burrell G-70 filler. Write Box 280, care this publication. 3-M

EQUIPMENT WANTED — One Plate Cooler with H L Frame to handle approximately 7,000 to 10,000 lbs. per hour. State best price in first letter. Write Maple Lane Dairy, Crete, Illinois 3-M

FARMERS HELP MILK SALES

With the announcement that two more large milk producers' cooperatives in the New York milkshed have voted to support Milk For Health, Inc., James A. Young, of Angelica, Allegany county, newly-elected head of the Metropolitan Milk Producers Bargaining Agency, and vice-president of Konhocton MPCA, expressed satisfaction in the way dairy farmers are meeting the challenge of marketing fluid milk.

"There is a growing feeling," Mr. Young said, "that with production levels at a new high, the job of our dairymen is to stimulate wider use of milk as a drink. Continued education of our growing population must be aimed at holding per capita sales. There is plenty of surplus manufactured products such as butter and cheese, and if the northeastern dairy farmer is to avoid controls, he will turn to such advertising and promotion methods as Milk For Health."

Konhocton Milk Producers' Cooperative Ass'n, Conhocton, N. Y., and Canajoharie Cooperative Milk Producer, in the Mohawk valley, have voted support of Milk For Health, to add prestige to the growing list of producer groups already participating. Other recently announced cooperatives joining the program are Mettowee Valley MPCA, West Pawlet, Vt.; Westfield MPCA, Westfield, Pa.; Smyrna Union Cooperative, Smyrna, N. Y.; and Chenango Valley Farmers' Cooperative, at Oxford.

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DAIRY EMPLOYEES GO TO SCHOOL

(Continued from Page 51)

Council; *Labor,* Edward J. Dennis and Fred J. Wettstein, Milk Wagon Drivers Local No. 226.

The Lecturers and Topics are:

1. Introduction to the Course. (Los Angeles) Speakers. E. Manfred Evans, Los Angeles Board of Education, for education; Paul Jones, American Federation of Labor, for labor; S. C. Hookstratten, General Dairy Industry Committee of Southern California, for industry. Lecturer, Richard J. Werner, California Dairy Industry Advisory Board. (San Francisco) Chairman, Max G. Sperling, Bell-Brook Dairies, Inc.; Dr. Herbert C. Clish, city superintendent of schools, for education; J. F. Jensen, Golden State Co., Ltd. for industry; Edward J. Dennis, president Milk Wagon Drivers Union, for labor. Lecturer, Richard J. Werner.

2. Economics of Dairying. (Los Angeles) Martin Blank, dairy economist. (San Francisco) R. A. Beaty, Golden State Co., Ltd.

3. Bureau of Milk Control. (Los Angeles) J. P. Duffy, State Bureau of Milk Control. (San Francisco) W. B. Woodburn, chief, State Bureau of Milk Control.

4. Production of Milk on the Farm. (Los Angeles) Frank Pellissier Jr., Pellissier Creamery, Pico, (San Francisco) Walter F. Gilpin, Golden State Co., Ltd.

5. Processing of Grade A Milk and Cream Products. (Los Angeles) E. Mikkelsen, Golden State Co., Ltd. (San Francisco) Dr. E. H. Barger, Borden's Dairy Delivery Co.

6. Processing of Grade A Milk and Cream Products. (continued). (Los Angeles) James Urquhart, Knudsen Creamery Co.; (San Francisco) E. L. Scaramella, Kraft Foods Company.

7. Manufacture of Frozen Dairy Products. (Los Angeles) George Sauer, Thrifty Drug Co. (San Francisco) William A. Dryer, Dryer's Grand Ice Cream Co.

8. Dairy Engineering Practices. (Los Angeles) James L. Brazee, Creamery Package Manufacturing Co. (San Francisco) H. B. Sheffield, Cherry-Burrell Corp.

9. Sales and Distribution of Wholesale Milk. (Los Angeles) James C. Bruce, Challenge Cream and Butter Assn. (San Francisco) M. E. Howe, Marin Dell Milk Co.

10. Sales and Distribution of Retail Milk and Nutritive Properties of Milk. (Los Angeles) Richard A. Wallace, Adohr Milk Farms. (San Francisco) Arthur J. Lawrence, Borden's Dairy Delivery Co.

11. Sales and Distribution of Ice Cream – Types of Ice Cream. (Los Angeles) James A. Carothers, Balian Ice Cream Co. (San Francisco) Clarence L. Malan, Carnation Company.

12. Your Place in the Dairy Industry. This is a general assembly session when Certificates of Completion will be presented. (Los Angeles) Harold Wakefield, Adohr Milk Farms, chairman. Speakers. For education–Dr. Howard A. Campion, assistant superintendent of schools. For labor, Einar Mohn, American Federation of Labor. For industry, A. M. Ghormley, chairman, California Dairy Industry Advisory Board. (San Francisco) E. A. Green, president Dairy Institute of California chairman. Speakers. John B. Stone, president San Francisco Milk Council. Mathew O. Tobriner, attorney. Oroville D. Adams, assistant superintendent of schools.